American Aviation

The Independent Voice of American Aeronautics **JUNE 15, 1944**

TECHNOLOGY DEPT:

Another Morrow Board

THE SUGGESTION made a few months ago by Eugene E. Wilson, vice chairman of United Aircraft Corporation, that the President appoint an American Air Power Policy Commission which would recommend to Congress a policy which would reflect the point of view of all responsible authorities, is a proposal of merit that should not be dropped.

Fortnightly Review

There is ample precedent. The Morrow Board, appointed by President Coolidge, charted the way for American air power in the early days, and what Mr. Wilson has called for is another "Morrow Board" to do a similar job for the future.

The appointment of such a board would be most timely. From now on until the end of the year there won't be much legislative progress. It is a ripe period for recapitulation, for study, and for planning.

Such a board should be comprised of responsible officials of the government and responsible leaders in industry. It should be fully representative of all interests—a national non-political group concerned only with this country's future air power.

As Mr. Wilson pointed out at the time he made the suggestion, we are in a situation similar to that which led President Coolidge to name the Morrow Board. But the actual need is much greater today than it was in the Coolidge days. The mere fact that the aircraft and subsidiary industries are employing today three-fourths as many workers as the entire U. S. manufacturing enterprise employed in 1940 is sufficient reason in itself to call for a planning report by an impartial board.

(Turn to page 9)

Revises Radio System

Thomas B. Bourne, director of federal airways for the Civil Aeronautics Administration, is directing the program now under way to convert the entire U. S. civil airways network to very-high frequency radio. (Page 17).

Late Bulletins

Air Tax Ban Sought

Legislation exempting from taxation all planes carrying cargo or passengers in interstate or intrastate commerce will be urged shortly in the California State Assembly by William Rosenthal, chairman of the Assembly's aviation interim committee.

CAB Shortcut Proposed

Introduction in the Senate of a bill (S. 1977) by Sen. Gurney (R., S. D.), authorizing issuance of temporary air route certificates by CAB without hearings, highlights a movement through which numerous applicants for small feeder routes hope to short-cut the long CAB certificating process and get early service started on their routes.

Trend of The News

Postwar Finance: Formal announcement that Douglas Aircraft Co. has arranged a revolving credit of $75,000,000 for current and postwar activities as needed—not with any Government Agency or Government guarantees, but with 17 leading banks—is definitely a high spot in aviation news of the fortnight.

The fact that private banking interests are ready to make such commitments for three years demonstrates a confidence in the peacetime future of the aircraft manufacturing industry which many people—even in the industry—did not think existed.

This action is seen by conservative industry observers as a possible trail blazing which may be followed by other financial interests who heretofore may have been skeptical of the volume of aircraft sales foreseen for the commercial peacetime market. (See Page 78)

Strip-Teasers: Proponents of landing strips constructed along highways as part of highway building are now called strip-teasers by those who want small landing fields built adjacent to small communities. Among the advocates of the latter is Charles I. Stanton, Civil Aeronautics Administrator, who opposes letting highway contractors run away with the ball and build landing strips willy-nilly throughout the countryside. Stanton believes all landing strips or small airfields should be located near communities where telephones and some type of servicing are available.

Surplus Planes: The Surplus Aircraft Committee, headed by CAB Chairman L. Welch Pogue and appointed by Surplus War Property Administrator Will Clayton to devise a basic policy for handling the "surplus" airplanes which will be on hand when hostilities cease, is expected to have its first report ready in a few days. Whether Clayton will make it public is not yet known.

The nearest anyone has come to an official estimate of the number of planes the Government will have, was Clayton's statement to the House Appropriations Committee that there would be at least 100,000 such planes, if the war continues another year. Clayton testified the latter part of April, but the hearings were not released until last fortnight. He did not specify the origin of his figure, but referred several times to the work of the Pogue Committee. Approxi-

(Turn to page 6)

20¢

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American Aviation

Vol. 8 No. 2 **June 15, 1944**

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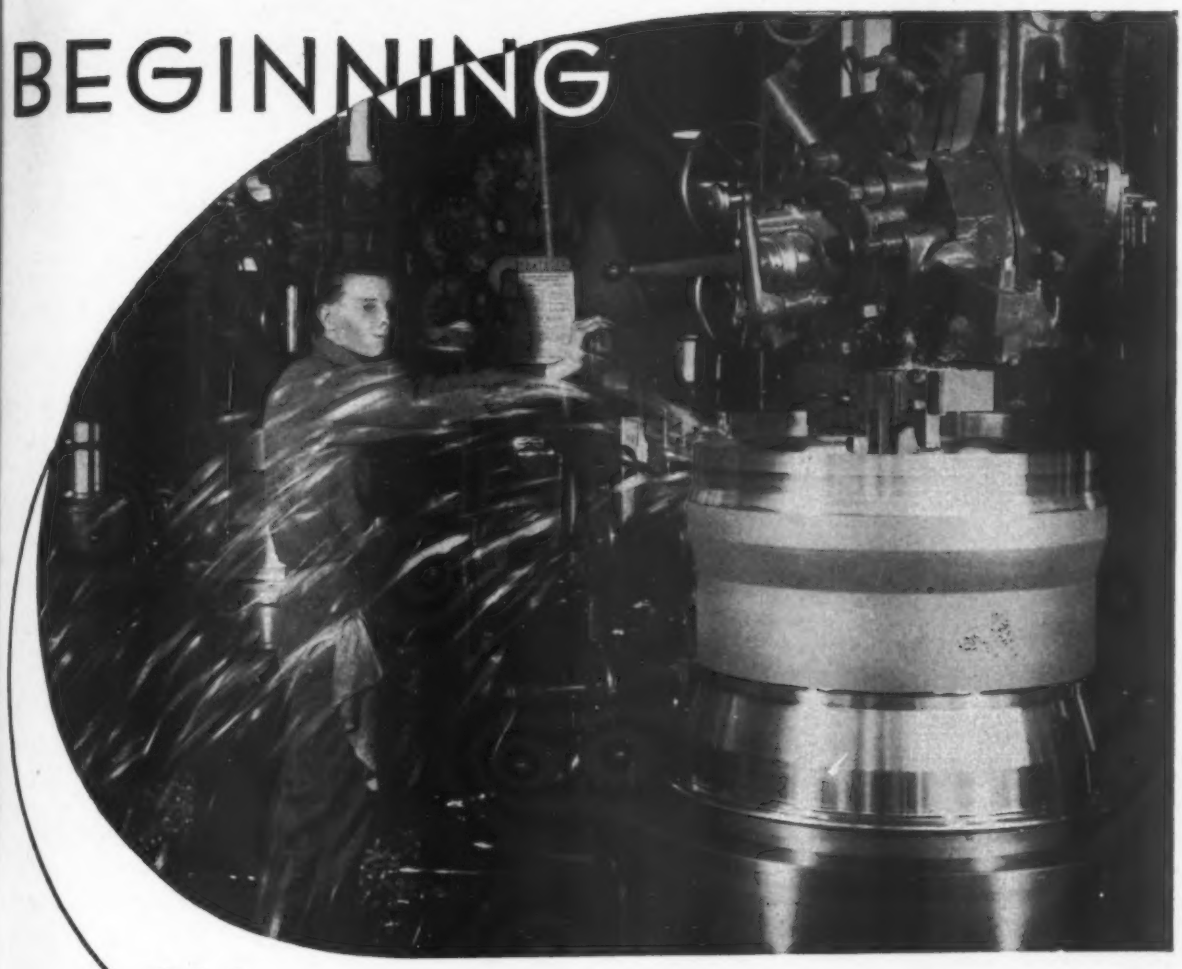
BEGINNING



OF A

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Trends

(Continued from page 1)

mately 15,000 of the planes will be transports, he said, wh can be used by airlines with very little alteration.

Meanwhile, it is indicated that surplus lightplanes ow by the Army may soon be put on the market. Here again number available is undetermined, but may run into the th sands and will include such makes as Stinsons. A series meetings have been held between CAA, the Army, Reconstr tion Finance Corp. and Defense Plant Corp. over who sh handle them and how.

Surplus Engines: In some respects the problem of ha ling surplus engines, when military demands cease, has m serious implications than the question of disposing of airpla Since thousands of spare bomber engines can be converted use in commercial transports, and since the most optimi Government price schedule would make them cheaper th new engines, manufacturers are wondering whether they w be able to keep their plants going.

The problem has been under discussion in Washington the past two weeks. It will be tackled soon by the revitali Aeronautical Chamber of Commerce and details probably w be given to the Senate's Murray Committee and other interes Government groups.

Cutback Rumors: A statement issued by the Ford Mo Company that it would soon take over at Willow Run production of all B-24 Liberator bombers has not yet be satisfactorily explained, although responsible scheduling offici have made it clear that such will not be the case.

As a result of this statement, however, North American Avi tion's plant at Dallas, Tex., lost 1,000 workers in one we Biggest manpower headache in the aircraft industry from no on will be keeping restless employes from leaving to hu "permanent" jobs which they think will be secure when w ends. The Brewster cancellation accentuated this trend. I dustry wants future cutback announcements handled with m

New Motive Power: With rapid strides being made the improvement of jet propulsion engines and the use of ne fuels (other than kerosene used in the original British typ being developed by U. S. aircraft manufacturers, numero revelations in the powering of airplanes can be expected al the war.

Proponents of gas turbine engines were given decided e couragement last week when Dr. Jerome C. Hunsaker, chai man of the National Advisory Committee for Aeronautics, sa in Chicago that development of gas turbine engines for civili postwar aircraft is feasible.

Currently the development is in the line of greater engi power, while little is being done in connection with assist take-offs—one of the problems of the cargo planners.

Recognition: Friends of Gill Robb Wilson, state aviati director of New Jersey who was chiefly responsible for t creation of the Civil Air Patrol, are howling privately about t lack of recognition being given to Wilson for having saved ci aviation from being taken over by the Army in toto at t start of the war. With a long record of aviation activi Wilson, president of NAA for several years, is now aviati editor of *The New York Herald Tribune*. Had it not been f him there would have been no CAP—and most likely no ci flying at all. But today only his friends remember that h made possible the formation of CAP.

C. A. R. Simplification: New proposals to further rel the Civil Air regulations affecting the private flyer may be ex pected in the near future. It is known that the Safety Bure of the Civil Aeronautics Board and CAA officials have be several conferences to that end. A greatly simplified set rules is in the offing.

Used Plane Market: Regional headquarters of the CA at Santa Monica, Cal., reports that many of the bids on th larger surplus WTS planes offered for sale—such as the Fai child—have come from commercial companies who want t use the craft in connection with business travel. (See page 4

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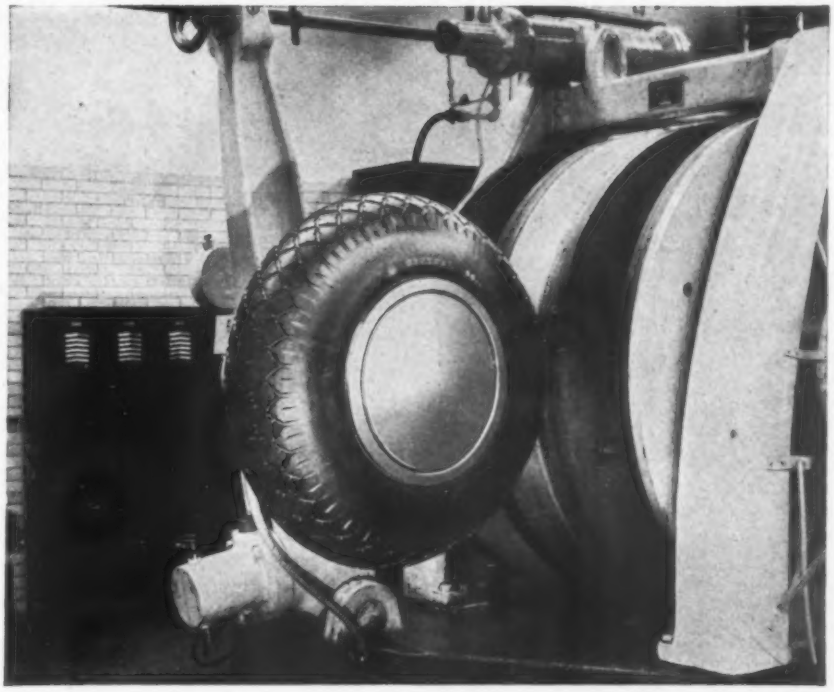

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Editorial

(Continued from page 1)

In the House of Representatives there is the excellent Woodrum committee on postwar military policy. By no means should any national board be set up without full approval and consent of this committee. It would be a splendid move on the part of the Woodrum committee, we feel, if it would on its own initiative request the President to appoint a fact-finding air policy commission to make recommendations to the President and to the Congress. Such a joint move would give encouragement to those who are struggling with the mammoth problems of postwar aviation.

Legislation Needed

THE MAJORITY DECISION of the Supreme Court May 15 holding that all of the airplanes of Northwest Airlines, Inc. could be taxed in Minnesota, points up the urgent need for Congressional legislation. Multiple taxation of airplanes used in interstate commerce will mean nothing short of disaster for every airline in the country.

Representative Bulwinkle has started the ball rolling by introducing a bill, H. R. 4935, providing for a study of multiple taxation of air commerce and calling for a report to Congress within six months by the Civil Aeronautics Board, together with recommendations for legislation. Had the controversial Lea Bill been enacted during the current session, the study would already be under way.

Although concurring with the majority, Justice Robert Jackson in his separate opinion recognized the dangers of multiple taxation and explained that in the absence of specific legislation the Court could only determine its decision by existing rules. It was a clear invitation to Congress to guide the Court.

Aviation Terms

MANY SOUND IDEAS spring from Sheldon "Buck" Steers, director of aviation for Michigan, and some of them came out of a conversation with him recently. We pass them on with due credit.

For years we have been talking about "promoting aviation" or some phase of it. What everyone really means, Steers points out, is the "advancement" of aviation. The word "promotion" has a somewhat sinister ring of a scheme, of pushing something by other means than merit. We think all aviation groups might well discard for all time the word "promotion" and substitute the word "advancement."

For just as many years everybody has been talking about "private" flying. Steers suggests it would be far better to refer to "recreational flying," since the word "private" infers something very personal and to the layman it may well set up a mental sign which means "private—keep out." The connotation of the word "private" is not stimulating for the advancement of recreational or pleasure flying. Most recreational flying involves more than just one person and it's the first flight as a guest passenger that usually gets one excited about flying more. We're for discarding the phrase "private flying" for something better and "recreational flying" sounds pretty good to us. Anyone have a better idea?

Wanted: A New Name

PROBABLY THE MOST confusing name in the aviation business is that of the fixed base operator. Most people have a difficult time understanding just what is a fixed base operator and what he does. How the name ever got started would be interesting to know, but so far no one has come up with anything better. Several years ago in these pages, at the suggestion of a member of the Civil Aeronautics Board, we asked for suggestions. There were no takers. We've never yet run across a suitable self-explanatory substitute. We're asking again, does anyone have a good name with which to describe the fixed base operator?

A Loss for the Nation

ONE OF THE best informed members of the House of Representatives and a constructive friend of aviation, John Costello, fell by the wayside in the recent California primaries. He was edged out by a very personable radio salesman, Hal Styles, who has cluttered up the airways selling "Frankie Gordon" clothes and conducting some synthetic emotional programs. Mr. Styles is probably a very nice guy, but that doesn't mean that he has the stature to cope with national problems. If he doesn't feel that way yet, he certainly should feel very sheepish to fill the shoes of able John Costello in Congress. It is hardly a tribute to our Democratic electoral processes that a radio salesman with one of those jolly winning personalities can remove from our legislative halls a fine citizen who has made a distinct contribution in national affairs. Mr. Styles had better do some tall thinking. The voters of this California district are not taking their community responsibilities very seriously.

Felicitations

THE SWEDISH airline, A. B. Aerotransport, celebrated its 20th anniversary June 2. While not the oldest airline with consistent record in the world, it is high on the list. Its history is a distinguished one, marked by successive technical and traffic contributions to air transportation. Not until 1946 will the first scheduled airline celebrate its 20th year in this country. The Swedes were operating safe scheduled air services for a considerable time before this country awakened to the advantages of commercial airlines. They deserve the hearty good wishes of the entire aviation fraternity.

Inviting Gas Rationing

WHILE AVIATION INTERESTS are trying to convince the Office of Price Administration that rationing of 73-octane gasoline for civil flying is ridiculous and unnecessary, some of the aviation fraternity are inviting rationing by overstepping the bounds of discretion and good taste. Some of them forget that the United States is at war. They should assume a more responsible position in community and national affairs.

For example we have a copy of a letter sent to organizations and airports by Louis Wiese, president of Air City, Inc., Sturtevant, Wis., inviting pilots and friends to attend a "postwar planning breakfast flight" at his airport. Prominent speakers "and a lively program all day" are promised—with prizes. With nothing short of amazing fortitude Mr. Wiese promises "a gala time for all" and if the weather is bad "we will expect you by auto." This is supposed to be the first flight sponsored by the "Wisconsin Civil Air Corps" this season. Letters were sent to airport managers of neighboring states.

In North Carolina a WTS operator who is now no longer training pilots for the Army took display advertisements in the local paper shouting that he was through with his pilot training and now had plenty of planes for sightseeing and instruction. The local newspaper criticized him editorially—and justifiably. We see no reason why pilot instruction should not be carried on, but the advertising of sightseeing hops only leads local citizenry to wonder why they have to have their automobile gasoline rationed while civil aviation carries on "business as usual."

We would like to suggest to Mr. Wiese and others who are promoting purely pleasure activities that they are hurting fixed base operators who want to stay in business legitimately. The quickest way to get rationing is to pull such monkeybusiness as promoting breakfast flights at the very time when millions of Americans are deeply concerned with the European invasion. And we might also suggest that the Detroit Air Show might have been more discreet in urging pilots to fly their planes to Detroit for the occasion. Not that we believe all civil planes should be grounded—we most certainly don't—but the majority who have legitimate reason for flying these days should not be injured by the indiscretions of a few.

Needless Red Tape

THE COLORADO PUBLIC UTILITIES COMMISSION is trying to become a Civil Aeronautics Administration all by itself. It has promulgated a 40-page set of regulations which it wants to put into effect for all flying—including airline flying—in Colorado. It is needless duplication of federal regulation. It can only lead to more red tape, more retarding of aviation advancement, and more expense to taxpayers and aviation alike.

As the Denver *Rocky Mountain News* said editorially, "This isn't a question of state's rights. It's simply a question of common sense." The Colorado proposal should be looked upon with disfavor by everyone in aviation. He who advocates such regulation by a single state for some special purpose will live to regret it, for state regulation of this type can't help anyone in the long run—it can only hurt *everyone.*

Where Are the Pictures?

WHEN WAR BROKE out we had visions of being flooded with photographs of U. S. airplanes in action. They've been few and far between. Somewhere there is a bottleneck which needs to be broken. We read in cable dispatches about the use of lightplanes in combat areas, but where are the photographs? The manufacturers of bombers are getting plenty of press breaks these days, but the manufacturers of lightplanes are getting almost nothing—yet the public will not be buying four-engined bombers after the war. They'll be buying the little stuff that has shown an amazing amount of spunk and agility in combat zones. Where are the aerial photographs which we expected? And the thousand and other subjects that should be put on stills and distributed to the aviation and general press?

Authorizing CPT Extension

THE McCARRAN ENABLING BILL extending the life of the Civilian Pilot Training Act from June 30 of this year to June 30, 1949, has passed the Senate but may get bogged down in the House.

We believe it would be sensible to extend the Act even if no funds are ever forthcoming for additional civilian pilot training by the colleges and universities. By extending the Act, the Civil Aeronautics Administration will not have its hands tied through lack of authority in promulgating further national defense plans. The McCarran Bill, introduced by Representative Harless of Arizona in the House, carries no funds with it—it is merely an extension of authority. Although we are inclined to believe federal funds for civil training are probably *out* for the time being, we do favor the extension of the Act on general principles.

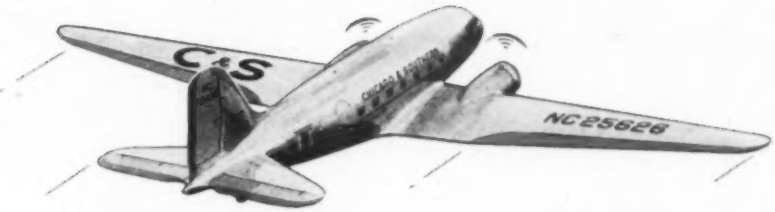
Bombers Into Transports

IT IS SURPRISING how many people outside the aviation industry believe fighting airplanes can be converted into peacetime use. Actually, officials have no hopes of converting a single combat airplane into commercial use of any kind. Only trainers and cargo planes can be used after the war by civilians. One effective way of explaining the situation to laymen has been concocted by Charles I. Stanton, Civil Aeronautics Administrator. A military plane can best be described as a weapon, not an airplane, he says, with comparisons made between destroyers and freighters on the high seas. It's an effective way of clearing up confusion in the lay mind.

Special Mention

ALTHOUGH THE BOOK is reviewed elsewhere in this issue, we would like to make special mention here of a new and brilliantly-executed volume, "Atlas of Global Geography" by Erwin Raisz. Over-sized and superbly illustrated, it is one of the best books on global maps we have seen anywhere. It's a plane's-eye view of tomorrow's geography which should be of interest to everyone concerned with tomorrow's aviation.

WAYNE W. PARRISH.



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Reply to REA

St. Louis, Mo.
May 23, 1944.

To the Editor:

Railway Express Agency seems to be asking questions of various individuals about its Air Express Division. I thought you might be interested in publishing my reply to the REA man who propounded the question to me.

C. R. MOONEY.

Mr. D. E. Cochran,
Railway Express Agency,
2413 Broadway,
Kansas City, Mo.

Dear Mr. Cochran:

The question propounded, on which I am requested to offer my views, as I understand it, could be stated in these words:

"What are your viewpoints as to the continuance of the handling of air express by Air Express Division of the Railway Express Agency?"

By inference, at least, I suppose the phrase, "in the post-war era," might properly be added to the question as stated.

I advocate the continuing service of your organization in that field, but not as a monopoly. If the question is intended to imply the perpetuation of a monopoly, I am opposed. Particularly do I stand opposed if that monopoly is to remain as an adjunct to a railway agency. Why not separate the air express service from the surface transportation service, as some years back American Express was set up as a unit to handle the travel side of your business?

Perhaps if the Air Express Division were established as a separate entity, with a staff of its own and a management committed to fostering the air express business as its one and foremost objective, competitively eager to build up its income by developing every possible new business resource, then my objection to monopoly handling of that business on a national scale would abate in some degree. However, there remains the prospect that two or three Air Express (or Air Freight) companies, with their own planes operating on the nation's main airways, distributing L. C. L. via the feeder or pickup lines about which much is being discussed at this time, with their own trucks or later, perhaps, helicopter delivery for local service, might be a better solution of the entire problem. Competition in this field, according to my viewpoint, will spur on the several firms engaged in the business; would therefore develop every possible advantage of air express in the future for the shipping public. If the experience of healthy competition proved that a national monopoly was necessary, then that could be developed later by a merger of the several concerns that pioneered the business.

These are personal viewpoints as we agreed I was to submit; therefore in no way are those opinions to be regarded as stating the views of any aviation organizations or institutions with which I may be connected.

C. R. MOONEY.

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Likes 'Old-Timers'

Pittsburgh, Pa.
May 20, 1944.

To the Editor:

I always enjoy your Fortnightly Review because you look at two sides of a picture. I am impressed by the editorial "Caution on Feeders," May 15 issue.

I disagree with you that the promoters of feeder airlines honestly believe the Government is going to guarantee the financial success of their operations. While politicians in Washington may think the promoters of feeder airlines are gullible, I would like to give you a factual opinion from the promoters of feeder airlines who are 'aviation people.' You will notice I say 'aviation people' as I want to exclude that class of applicants who have never been in aviation and recently awoke to challenge the old-timers with all sorts of fantastic aspirations.

The promoters of many feeder airlines are old-timers in aviation who, through intimate knowledge of their charter business and the territory they fly over, now see future operations possible due to the advancements both current and coming in aviation.

These old-timers in aviation have never asked or wanted anything from Washington politicians unless it might be to be left alone. They are pioneers, and sensible pioneers, otherwise they would not remain to become old-timers in aviation. They have seen all sorts of political boondoggling thrust upon them, and they have put up with all kinds of political parasites trying to run their affairs.

Your article intimates that these pioneers are building up false hopes of obtaining government aid. As one who has been in close contact daily for many years with these old-timers in aviation, I want to take the liberty of expressing the outstanding thought among these people who have made aviation what it is today, and that is this: They do not expect the government to guarantee the financial success of any of their operations. In fact, they do not expect the people in Washington to be any more than the politicians they have always been. With or without the Post Office Department, federal expenditures, projects and proclamations these old-timers in aviation will keep right on pioneering tomorrow as they do today, as they did yesterday and the day before.

R. V. TRADER.
Bob Trader Aero Supply

Editor's Note: Did not able and alert Bob Trader answer his own letter when he alludes to "that class of applicants who have never been in aviation and recently awoke to challenge the old-timers with all sorts of fantastic aspirations"? The editorial was directed at uneconomic promotions which are not destined to succeed. Old-time aviation people, as Trader says, know what it's all about.

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Boomerang from Burbank

May 22, 1944.

To the Editor:

On editorial page 9 of your very excellent magazine of May 15th is the statement:

"STANDING GETS TIRESOME
ADD AIRPORT TERMINALS that need more seats for waiting passengers:
Lockheed Terminal, Burbank."

Let us say right off the bat that we know you are right insofar as the number of chairs and benches in the lobby is concerned. You might be interested, however, to know how many times we have made surveys and attempted to put more benches and chairs in our lobby only to find, after these attempts have been made, that, due to the smallness of our lobby, these additional chairs and benches caused a serious bottle-neck and considerable congestion. People sitting on the benches, which we placed in the center of the lobby, usually sprawled and persons passing them usually stumbled over their feet and packages, and it reduced an already narrow space to one which permitted the passage of not more than two persons between the benches and the counters comfortably.

Outside the Terminal Building, adjacent to Gates No. 2, No. 3, No. 4 and No. 5, there are 15 benches with a comfortable seating capacity of 75 persons. Inside the Terminal, there are benches and chairs for 34 people, and at the entrance to the Terminal, there are 2 benches with a seating capacity of 16 people. These last are used primarily by those waiting for taxis and buses.

We believe the only logical way to determine whether there are sufficient benches or other seating arrangements for passengers is to divide the number of such seating capacity into the number of airline passengers carried per year. Percentage wise, therefore, we have a seating capacity roughly of 10% of the number of airline passengers who actually use the Terminal daily. We think this is a fair average. In fact, in checking with the Union Station in Los Angeles, the average there is much lower.

We assure you that we are sorry you had to stand, or that anyone has to stand, but this Terminal was built many years ago, and as terminals go, we know it is inadequate for present day use.

DUDLEY M. STEELE
Airport Manager
Lockheed Air Terminal, Inc.

Editor's Note: No, we didn't stand. We sat on the stone steps leading to the second floor until the clean-up man swabbed them with a wet mop. And as to those 75 seats outside the building—does Airportman Steele recognize that when it rains in Los Angeles it really rains—but hard! How about hydraulically-lifted benches that could disappear in non-rush hours—that would only cost Lockheed several hundred thousand Smackers! Anyhow, thanks to Airportman Steele for his rejoinder. Seems to us there is going to be a surplus of sore feet throughout the country until airport terminals are enlarged.

Books

ROCKETS. By Willy Ley. 286 pp. Published by The Viking Press, New York. $3.50.

If inter-planetary travel ever becomes possible in the centuries to come, Willy Ley will have a prominent place in the annals of rocket development. He is completely confident that man will be able to explore the inner solar system. His book is apt to bewilder the layman but it will interest the aeronautical engineer who can read his technical chapters with some understanding of what it's all about.

A popular writer of science and weapons, Ley was a leader in the German rocket experiments in the pre-Hitler days. His book brings between two covers the entire history of rockets, of rocket bibliography, and technical summaries, and the net result is impressive enough to make the layman sit back and wonder what the future will bring.

"We definitely know two things", says Ley. "One of them is that at least some of the other planets—including our moon—are within reach, even though it cannot be done tomorrow or next year. The other thing we know is that the spaceship has to be based on Sir Isaac Newton's Third Law of Motion."

One learns a lot about rockets from Ley. They are not 'shot' and they do not 'fly'. "They are 'fired' and no initial motion is supplied to them; they do all their own propelling from that moment on. Rising, they do not 'fly', they cleave the air more or less in the manner of a projectile." Thus, one cannot "fly" to the moon.

The rocket, he says, is absolutely worthless as a prime mover for wheeled vehicles. It is almost worthless as a prime mover for aircraft, "at least in the sense of not being able to replace the internal combustion engine for any known type of aircraft". The rocket is, "simply and unconditionally, a rocket . . . It cannot function efficiently if one tries to make it something else. A rocket is good only as a rocket."

Ley describes the meteorological rocket which he says will be developed first. Next will come a space rocket, unmanned, and then a spaceship in which people can travel. "We can say, for example, that a trip to

ON MERIT ALONE

From its beginning, in 1929, Curtiss-Wright Technical Institute set out to do a job, a good job—and do it a little better. As a result this school has attained pre-eminence in its particular educational field in Aeronautics. This growth, together with an enviable record of past achievement, is a tribute to INDIVIDUAL INCENTIVE and the ABILITY and EXPERIENCE of men who literally *have grown up in Aviation* and know their business.

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CURTISS-WRIGHT TECHNICAL INSTITUTE...BEFORE THE WAR · DURING THE WAR · AFTER THE WAR

Venus and back would last two years, one month, and a few days. Nor is this prediction idle". Such is the manner in which Ley writes.

"A rocket finds its usefulness in the limitless space which is above the reach of anything else . . . The altitude to which a rocket can ascend is not limited by any natural law it is limited only by engineering considerations . . . The space rocket will be simple once the meteorological rocket has passed the 200,000-foot altitude mark. So much is certain right now. And there is little, if any, reason to doubt . . . that the exploration of the inner solar system will be easy once the station in space has been established".

One thing in Ley's favor is that no matter how definite his predictions, he puts no time tag on them.

—W. W. P.

•

ATLAS OF GLOBAL GEOGRAPHY. By Erwin Raisz. Oversized and profusely illustrated with maps in color. Sole distributors, Harper & Bros., New York. $3.50.

Here is a splendid eye-catching and informative atlas that makes a lot of sense. It is a geography in the air age and the manner in which the subject matter is presented is tremendously effective and ingeniously performed. It is not a reference book in the usual manner of atlases. It is good solid reading and the art work is of exceptional value. It's truly a beautiful book that should be useful in schools but also will capture the interest of anyone in aviation.

Mr. Raisz is lecturer in cartography at the Institute of Geographical Exploration, Harvard University. The book itself is a product of Global Press Corporation which evidently is interested in global maps of various kinds.

What this book does is to portray the global world of the air age in terms of actual geography, all implemented with pictorial commentaries on poverty, disease, hunger, inaccessibility, illiteracy, etc.—all world problems. Comments are brief, well chosen, and very much to the point. It is difficult to describe the book beyond this point for there has never been anything quite like it. All we can do is to give it an A-1 recommendation for all research libraries, all aviation libraries, and for every private library of those interested in international aviation. We give it a "must" rating.

—W. W. P.

•

THE OXY-ACETYLENE HANDBOOK. *Published by Linde Air Products Co., New York 17, N. Y. 587 pages. $1.50.*

This publication is a complete textbook on basic oxy-acetylene welding and cutting procedures. It will prove valuable as a guide for self-instruction and also as a standard classroom textbook in vocational and trade schools, technical high schools and engineering colleges.

Obituary

Lawrence J. Chiappino

Lawrence J. Chiappino, 40, of Washington, a pilot for Transcontinental and Western Air since 1930, died of a heart attack May 28, at Dayton, O., where he had been assisting the Army Materiel Command in flight testing TWA's Lockheed Constellation. For several months, Chiappino had been TWA's chief test pilot on the Constellation and had a record of more than 100 hours at the controls. He had flown nearly 3,000,000 miles since he earned his wings at the Army's Brooks and Kelly Fields in 1928. Chiappino's first airline job was with Western Air Express. Prior to the war he was assigned to TWA's Los Angeles-Albuquerque run, and since Pearl Harbor was attached to the airline's Intercontinental Division, flying the Atlantic for the Air Transport Command.

Courtesy Consolidated Vultee

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IN 1940 the Signal Corps brought one of its toughest radio assignments to Bell Telephone Laboratories and Western Electric. A rugged multi-frequency set was wanted for the Armored Forces—in effect, a radio switchboard to interconnect tanks, scout cars, command cars, artillery units, anti-tank vehicles.

A model was submitted in one-quarter of the time normally required to design and build such a complex set—an FM transmitter and receiver having 80 crystal controlled frequencies. Any 10 crystals could be quickly plugged in—and push buttons provided instant switching. The set was tested—accepted—ordered in quantity.

Among the most difficult of the many production problems tackled by Western Electric engineers, were those of crystal manufacture. Millions of these tiny quartz wafers would be needed—each lapped to dimensions, metal-plated in a vacuum, mounted on wires so small they must be soldered in place under a microscope. Amazing new machines and methods were devised—crystals poured out on time.

Today huge numbers of units have been made by Western Electric and its sub-contractors. They are providing the instant communications that enable our Armored Forces to travel farther, faster and to hit harder.

Knowledge and experience gained and new techniques developed on this FM tank radio project will find application in finer equipment for aviation radio.

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ARMY E NAVY

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CAA Begins 'Rebuilding' Civil Airways

Very-High Frequency Radio Will Supplant Present Network; Blind Landing Planned

By Eric Bramley

PRELIMINARY STEPS are now being taken in one of the biggest jobs ever tackled by the Civil Aeronautics Administration—the conversion of the entire U. S. civil airways system to very-high frequency radio.

When completed, this move can be expected to change completely the operations methods of the U. S. domestic airlines. High-speed one-stop transcontinental flights will operate at high altitudes, flying Great Circle courses by use of radio direction finders, using the radio beam only for a short time after take-off and before landing.

The present radio range system operates on frequencies between 200 and 400 kilocycles. At these low frequencies, it is subject to multiple courses, night variations, static and inter-station interferences. The VHF (very high frequency) system, 120 to 130 megacycles, eliminates practically all these disturbances.

At the same time, the CAA is proceeding with a program which will eventually result in the location of an instrument landing system at every major U. S. airport—a system which will permit airlines to maintain regular service under very poor ceiling and visibility conditions.

Conversion of the civil airways system will be a gigantic job—comparable, as one official put it, to a mainline railroad deciding to change the gauge of all its track. All radio range stations in the U. S.—there are 291 of them—must be replaced with VHF, a "grid" of low frequency ground stations for radio direction finding equipment must be established, and the airlines must change the radio equipment in their airplanes.

Under Bourne's Direction

The entire program is under the supervision and direction of Thomas B. Bourne, director of federal airways for CAA. Charles I. Stanton, CAA Administrator, has followed its program closely. The program started while he was director of federal airways.

CAA had planned to start this conversion three years ago, but with U. S. entry into the war, the Army took all VHF equipment that CAA had ordered, at the same time re-ordering it to CAA's account. Manufacturers are now in a position to deliver some of the CAA equipment, it is understood.

Before war interrupted, only one airway—New York-Chicago—was equipped with VHF, and this has not been used by the airlines, except for a small amount of testing, because of lack of necessary radio equipment in their planes. CAA is now in the process of bringing this airway even more up to date with newer equipment, and will shortly start installation of stations at other points. Order in which stations are to be put in has not been definitely determined.

The entire conversion job, exclusive of the direction-finding "grid" is expected to cost between $10,000,000 and $20,000,000. The original estimate was $10,000,000, but with the addition of some instrument landing equipment and the addition of more stations, the total figure may run as much as double that amount. Through appropriations for the past three years, the CAA now has money for equipment for approximately 45% of the job, and has let contracts for that amount of work. It will be at least three years before the job is completed.

The conversion is expected to be an exceedingly complicated job. While construction is under way, the present radio range system must be kept in full operation, with no interruption in service. For some time it will be necessary for the airlines to carry two sets of radio equipment—one VHF and one for present frequencies. When the system is completed, airline planes must switch over to the VHF sets, and this may cost the airlines as much as $500 per airplane. New planes purchased after the chanegover would come equipped with VHF, and no conversion cost would be involved.

When the complete changeover is accomplished, domestic airline operations may be divided as follows:

1. Local and feeder flights will operate at low altitudes, using the VHF radio ranges. Most private flying will also be at low altitudes.

2. Through, one-stop transcontinental flights, or express schedules over 600 miles long, will be made at high altitudes. After taking off, the pilot will use the airway until reaching a prescribed altitude, which will be above other normal traffic. He will then, in effect, become independent of the short-range airways system, and will use radio direction-finding equipment. By using this country-wide "grid" of stations, it will be possible for him to fly the more desirable and shorter Great Circle course. When letting down for his intermediate or terminal stop, he will again use the airways.

Thus, there will be for the first time in the U. S. a definite division between local-feeder and through, high-speed air transportation.

No Complications

Bourne emphasizes that the changeover will not complicate things for the private flyer. In order to use the airways, private planes need only be equipped with VHF receivers or transceivers (the latter permitting transmission and reception with the same set), he points out. When in production, such sets should cost no more than present radio equipment, he adds.

CAA believes that a "grid" of 24 low-frequency ground stations for radio direction-finding purposes will cover the U. S. adequately. These will be 5-kilowatt stations, compared with the present average of 300 watts for radio ranges. The present ranges cost about $60,000

(Turn page—column 3)

Why It's VHF

Why the airways system to be installed by the CAA is called "very-high" frequency can be seen from the following table, which is now used to describe different frequencies:

0 to 30 kilocycles is termed "very low."
30 to 300 kc is "low."
300 to 3,000 kc is "medium."
3,000 to 30,000 kc is "high."
30,000 to 300,000 kc is "very high."
300,000 to 3,000,000 is "ultra high."
3,000,000 and over is "super high."

The CAA system, 120 to 130 megacycles (1 megacycle is 1,000 kilocycles) thus falls in "very high."

Personal Planes May Be Equipped With VHF Radio Equipment

Future personal planes may have very high frequency radio as standard equipment, to enable pilots to fly the airways, which are now being converted to VHF by the Civil Aeronautics Administration.

However, any such program to equip personal planes is not believed to have progressed beyond the "talk" stage, with many details remaining to be discussed. It is pointed out that any receiver or transceiver decided upon for use in personal planes must be both lightweight and inexpensive. One official stated that too often in the past equipment has been "expensive, cumbersome and heavy."

Officials, who have kept personal plane representatives informed of the status of the airways conversion program, are anxious to see VHF included as personal plane equipment.

Housing Orders Considered For Surplus Plane Plants

POSSIBILITY THAT the Government may be able to hand to aircraft manufacturers after the war ready-made orders for a vast quantity of pre-fabricated housing, as a means of providing a new product and an employment program for their surplus plant facilities, came to light in Washington this week.

Leo T. Crowley, administrator of the Foreign Economic Administration, has begun an inquiry into the feasibility of putting such orders into the plants for which plane makers will have no immediate use when military orders are terminated, it was learned.

Crowley is seeking first to determine whether aircraft manufacturers are interested in undertaking such an assignment, and second, the amount of plant facilities and trained labor which may become available for the project.

To Aid Foreign Lands

It is known that the FEA administrator is particularly interested in being able to supply pre-fabricated housing to the liberated countries as quickly as possible after the war ends, and that under plans now being shaped up by FEA it is proposed to ship vast quantities into numerous countries in various parts of the world.

In addition to the FEA demand, he has pointed out that a major market for prefabricated housing exists in the United States and demand is expected to be heavy for several years after the war.

While the reaction of the aircraft industry to his proposal is as yet unknown, such companies as Consolidated Vultee have investigated the prefabricated housing field and prepared studies for their own guidance.

Practically all major aircraft companies have research staffs at work on studies of the feasibility of non-aircraft products for postwar manufacture in plant space that cannot be used for the anticipated peacetime airplane production.

The only firm which has announced specific plans is The Aviation Corporation, which last April said it has worked out plans for the production of ranges, heaters, refrigerators, deep freezers, wheel goods and electronic devices—while continuing to make diversified aircraft products, including engines, propellers and precision parts.

Dr. A. J. Snow, former technical director of Sears, Roebuck & Co., was retained by Aviation Corporation to investigate markets for postwar consumer goods, and Col. Philip J. Reilly, former managing director of Associated Merchandising Corp., was appointed to head the distribution program for the civilian products.

Russia, China and U. S. Air Parley Continuing

Russian and Chinese discussions of postwar international aviation with the U. S. State Department will continue for some time.

The Chinese group consists of Chang Kia-Ngua, minister of transportation; Maj. Gen. P. T. Mow, Chinese Air Forces; and Liu Chieh, Chinese minister and counselor of the embassy in Washington.

The Russian delegation includes Ambassador Andrei A. Gromyko; Lt. Gen. L. G. Rudenko; Maj. Gen. A. A. Avseevich; Maj. Gen. N. I. Petrov; and Col. P. F. Berezin.

The American group participating in the exploratory talks includes Ambassador Joseph C. Grew; Assistant Secretary of State Adolf A. Berle Jr.; L. Welch Pogue, CAB chairman; William A. M. Burden, assistant secretary of commerce; and Stokeley W. Morgan, chief of the aviation division of the State Department.

Extension of Pilot Training Urged On House Committee

The House Interstate and Foreign Commerce Committee opened hearings last fortnight on Senate-approved legislation extending the civilian pilot training program five years from its expiration date, July 1, with Rep. Jennings Randolph (D., W. Va.), CAA Administrator Charles I. Stanton, and R. McLean Stewart, former executive director of War Training Service, testifying in favor of the extension, as first witnesses.

Committeemen present at the opening hearing appeared generally favorable to the extension, but some opposition to the legislation is expected from members of the Committee who signed the minority report on the Lea bill objecting to further civilian pilot training until all war flyers have been absorbed by civilian aviation.

As first witness, Randolph supported a stipulation in his extension bill requiring that "at least 25% of the civilian pilots trained each year be from the 16 and 17 year-old age group. The proposal to draw trainees from the high school group was endorsed by Stanton and Stewart, but Stewart objected to the provision being written into law, and suggested it would be restrictive, if, for example, in some years all trainees selected happened to be in the 18 to 21 year-old age group.

All witnesses emphasized the importance of teaching the youth of the nation to fly, even though they may never aspire to become commercial pilots or enter the aviation field. Stanton predicted that "in ten years" it will be "the unusual individual of 25 who will not know how to fly an airplane." Stanton also stressed the importance of private flying to maintain an aircraft industry of "effective size".

A half-page advertisement which the Army Air Forces has inserted in daily newspapers, urging high school students to sign up for preliminary flight instruction, evoked considerable discussion in the Committee. Stanton interpreted it as a "plain indication that the Army sees the necessity of looking ahead to a continuous flow" of pilots. Stewart said that although the Army does support wide preliminary flight instruction to the youth of the nation it is opposed to the civilian pilot training program continuance because it sees fit to include flying instruction in a program for postwar compulsory universal military service.

Stewart submitted to the Committee an outline for a program to give preliminary flight training to 100,000 young men each year. He estimated that the program would cost the Government $30,000,000 annually. Later, he suggested, women might be included in the program.

CAA 'Rebuilding'

(Continued from preceding page)

each, while the new stations are estimated at about $50,000 each.

Each station in the "grid" will emit a signal traveling in all directions from the station. If the pilot were, for example, to tune in on the frequency of station A, an indicator on his instrument panel would show him his exact bearing from that station. By making a similar check with station B, he would be able to plot his exact position. Thus it would not be necessary for him to follow a radio range track.

It will be possible to take bearings on stations of this power from at least 300 miles away in unfavorable weather, and from 600 to 700 or more miles away in good weather.

Zero-Zero Landings

The instrument landing systems to be installed by CAA consist chiefly of two parts—a localizer (a radio beam directed down the middle of the runway and out several miles from the airport) and a glide path (a curved beam indicating the path the pilot should follow in descending to the runway). Both localizer and glide path are "seen" by the pilot on an instrument in the airplane, the localizer by a vertical needle, the glide path by a horizontal needle. When the localizer needle is exactly vertical and the glide path needle exactly horizontal, the pilot knows he is lined up with the runway and is descending correctly for a landing.

Officials state that this system makes landings possible in zero-zero weather, and is developed to the point where it can be safely used by the airlines.

At present, CAA is installing only the VHF localizers, installations to be made at all major airports. Glide path equipment is to be furnished by the Army.

Practically all traffic control towers are now equipped with VHF transmitters and receivers.

In converting the system, CAA also hopes to straighten out some of the "bends" in the present set-up. As presently constituted, the system in many places does not permit a pilot to fly in a straight line between two points. It is believed that it may be possible to straighten courses to some degree, thus reducing mileage flown.

Aviation Calendar

June 17—Meeting steering committee, Airworthiness Requirements Committee of ACCA, at Douglas Aircraft Co., Santa Monica.

June 23—National Air Cargo Packaging Forum, Hotel Pennsylvania, New York.

June 23-24—Meeting of officers and directors, Aviation Distributors and Manufacturers Association, Edgewater Beach Hotel, Chicago.

June 26—West Virginia Aviation Planning Forum, Charleston.

July 5—Dedication of hangar, Southern Airways, Atlanta, Ga.

July 10-12—American Association of Airport Executives, annual meeting, Sherman Hotel, Chicago.

July 17-18—Air Traffic Conference regular meeting, Denver.

July 27-28—California Conference on Aircraft Landing Facilities, Hollywood Roosevelt Hotel, Hollywood.

Aug. 1-2—Eastern Division meeting, Airworthiness Requirements Committee, New York; Western Division meeting, Los Angeles.

Aug. 2-3—National Business meeting, National Aeronautics Association, Denver.

Sept. 4-6—Annual meeting Aero Medical Association, Hotel Jefferson, St. Louis, Mo.

Oct. 5-7—SAE National Aircraft Engineering and Production meeting and engineering display, Biltmore Hotel, Los Angeles.

Nov. 15-18—Second National Aviation Clinic, Oklahoma City.

Dec. 4-6—SAE National Air Cargo Meeting, Hotel Knickerbocker, Chicago.

Jan. 8-12—1945 SAE Annual Meeting and engineering display, Book-Cadillac Hotel, Detroit.

Committee Will Study Flight Training Plans

College and aviation associations were represented at a recent meeting with Assistant Secretary of Commerce William A. M. Burden to discuss a long-range policy for postwar aviation flight training. A committee, headed by John E. P. Morgan, chairman of the Personal Aircraft Committee of the Aeronautical Chamber of Commerce, was named to work out a concrete program.

Members of the working committee, whose program will be presented to the full group for discussion and action at a later date, include Dr. William A. Lloyd, president of the American Land Grant Colleges; Dr. F. I. Brown of the National Council of Colleges; Lowell Swenson, manager of National Aeronautics Association; Dexter Martin, president of the National Association of State Aviation Officials; and John Wilson, Executive Director of National Aviation Trades Association.

First Photographs of Black Widow Show It As Deadly Night Fighter

'Nothing short of a pill box can withstand . . .

By PEGGY GUETTER

NORTHROP AIRCRAFT'S "Black Widow," streamlined black fighter with the deadly sting of her namesake, is pictured for the first time as the War Department permits publication of pictures of the new fighter two years after her first test flight from Northrop Field, Hawthorne, Cal.

Production of the twin-boom, twin-engine aircraft is in full stride. A 30% increase in original output schedule testifies to the enthusiasm in military circles for the plane's performance.

Actual performance and armament remain secrets. "Tests show that nothing short of a pill box can withstand one blast of its battery of guns," Northrop officials say.

As well as possessing tremendous firepower, the "Widow" incorporates the latest equipment for night fighting. Powered with Pratt & Whitney engines, the plane develops high pursuit speed while retaining easy flying characteristics and low landing speed necessary for night operations, its makers say.

The craft, designated as the P-61 has given excellent showing in single-engine and stall-speed performance.

The distinctive coat of paint, now shining black instead of the original dull coat, is a result of exhaustive tests to find the best camouflage for night operations as well as increased speed.

Developed in utmost secrecy, the widow is the first functional night fighter of the war. Design was started in 1941 at the request of the AAF which laid out a list of requirements for night fighters based upon lessons learned in the European Theater.

The company was first permitted to announce existence of the model Jan. 8, of this year. Simultaneously, the Widow flew over the Army-Navy War Show at Los Angeles Coliseum.

It is described as the largest and most powerful pursuit ship ever built.

. . . one blast of its battery of guns.'

Revision of Mechanics' Rule Scheduled For Action Soon

PROPOSED REVISION of Civil Air Regulation No. 24 to reclassify aviation mechanics on the basis of special skills, many of them developed through war experience, is slated for affirmative action in the near future, according to officials of the Safety Bureau of the Civil Aeronautics Board.

This regulation has been in the process of revision since 1939 and has gone through a series of refinements but still there is lack of complete accord between CAB and CAA Safety officials on the necessity for certain changes and the degree of federal regulation required.

Set aside temporarily while the Board has been engaged in revising its regulations on Pilot Certification Rules and Air Traffic Rules, Regulation No. 24, entitled, "Mechanic Certificates," is ultimately due for a complete overhauling with a view of more nearly meeting the requirements in the field of postwar aviation.

Some indication that the industry is becoming impatient with the delays in making the new revisions effective has come to light in recent weeks. John M. Chamberlin, assistant director of the Board's Safety Bureau, put much of the blame on the industry itself.

Few Queries Answered

"In April of 1943 we sent out more than 600 copies of Draft release No. 40 which explained the proposed changes in Regulation No. 24 together with a copy of the revised regulations in the form finally submitted by the Administrator, through the office of Fred Lanter, director of Safety Regulations. We asked the industry for its comments. We received only 18 responses," Chamberlin stated.

Chamberlin said a summarization of these replies indicated that a majority agreed there was need for revision but a majority also asserted the proposed revisions were not the answer. A majority also felt that changes should not be made now but should wait until after the war.

He said the Board had been reluctant to put the proposed revisions in effect without a more representative response from the parties who are to be affected by these changes.

Many talks and discussions have been held between the Safety Bureau staffs of both CAB and CAA together with various representatives of the industry to learn what part of the revised rules were objectionable, Chamberlin said. Some of these points in controversy have been cleared up to a certain extent.

Delay Criticized

Lanter minimized the importance of the meager industry response on the grounds that persons who are satisfied with the revised regulations are less apt to write than are the critics. He feels, as does Charles I. Stanton, the Administrator, that the changes are long overdue, that only through the proposed revisions will certification of mechanics be placed on a realistic basis.

Shown a statement which had been written by an official of a mid-western aviation school which criticized this delay, Lanter said he was in complete accord with the writer's views, which said in part:

"C.A.R. 24 is no longer applicable to the flying "facts of life." Established some years ago, the regulations covering the "ticketing" of A. and E. (Aircraft and Engine) mechanics have stood still while many improvements have been introduced into the flying business. For instance, superchargers, controllable-pitch propellers, new devices and techniques in radio, tremendous advancements in production methods, great strides in all-metal construction, marvelous developments in engines, hydraulic manipulation of landing gears and other controls—all these and others have been either introduced or refined since C.A.R. 24 was written.

Horse-and-Buggy Rules

"While progress surged ahead, air regulations stood hitched to the 'horse-and-buggy' days of aviation. If the military maintenance shops and repair depots followed procedures as antiquated as are the civil regulations as to A. and E. mechanics, our fighting forces would be trying to beat back the Axis air attacks with old 'Jennies' and OX-5 motors."

Under the proposed revision, aviation technicians are classified as follows: aircraft technicians, aircraft engine technicians, and aviation specialist technicians. The first two classes are graded according to qualification and experience as mechanic, senior mechanic and master of maintenance. The specialist technician is graded as specialist or senior specialist.

Aviation technicians are to be rated with respect to the type of work for which they have qualified. The aircraft technician is rated for general maintenance and service, and repair and overhaul of either composite or metal aircraft structure. The aircraft engine technician is rated for maintenance and service or the repair and overhaul of supercharged or unsupercharged aircraft engines. The aviation specialist technician is rated for the repair or overhaul of propellers and other appliances.

'Jack of All Trades'

The proposed combination of classes, grades and ratings is designed:

(1) to provide for the certification of mechanics trained to perform certain types of work without requiring the general range of experience prescribed under the present regulations;

(2) to extend privileges commensurate with the technicians experience and to increase the scope of the privileges as additional experience is acquired;

(3) to provide for the certification of specialists as such, who may perform and be responsible for work within the scope of their particular speciality.

Lanter explained that under the present certification rules, a mechanic had to be virtually a "jack of all trades" and he inferred that the rest of the old bromide "master of none" might well be applicable today considering the degree of knowledge and experience that is required theoretically before a mechanic is eligible for the Aircraft and Engine certificate.

While Chamberlin is of the opinion that narrowing of classifications according to skills and issuing special certificates for each class may involve a trend toward further government regulation, Lanter believes the opposite is true.

Particular Needs Met

"It will become increasingly difficult to obtain mechanics, in the numbers necessary in the postwar period, who can qualify for certificates under our existing regulations. What we propose to do is certificate a man for a particular need," Lanter said. "The new regulations will put a premium on good work and honesty and there will be a prospect for advancement, based on experience and ability. Instead of a man having to know all about airframes, both all metal and the 'stick and wire' types and supercharger and non-supercharger engines we'll certificate him for the skill for which he has qualified and eventually such a man can work up in his classification to master mechanic where he could be authorized to inspect work and put it out for service."

Both Chamberlin and Lanter are agreed that only by delegating to master mechanics the authority of inspectors can the regulatory bodies such as CAB and CAA keep up with the activities and development in postwar aviation. This, they feel, will give the industry the maximum of service, with a minimum of delay and a minimum of red tape. Regular CAA and CAB inspectors, even if a great increase in government funds were made available for the purpose could not hope to keep abreast of all of the inspection work which would be necessary, they contend.

Frequency Plus

How the Air Transport Command is flying the oceans and mountains was graphically revealed May 29 by Maj. Gen. Harold L. George, ATC commanding general, in a radio interview on ATC's third anniversary.

Here's the record:

Atlantic Ocean—"Today the ATC is making a scheduled trans-Atlantic crossing every 22 minutes, day and night."

Pacific Ocean—"Our planes are crossing the Pacific from California to Hawaii and into Australia and the islands of the Pacific every hour and 42 minutes every day of the week."

Over the "Hump" into China—"I am thankful to be able to say that the ATC today and for many months past has been moving over the Hump more tonnage into China than was ever moved by the old Burma Road . . . If you could stand on one of the mountain peaks out there in Burma you could see a transport plane . . . carrying vital war supplies into China passing overhead every 12 minutes, day or night."

WASP Program Extension Turned Down By Ramspeck Committee

THE HOUSE Civil Service Committee, headed by Rep. Robert Ramspeck (D., Ga.) ineffect, has told the Army Air Forces to drop plans for expanding its WASP program for training women non-combatant flyers and draw on the large reservoir of experienced men pilots available for service duties.

The report, filed this month, was a climax to growing Congressional sentiment against legislation, proposed by Rep. John M. Costello (D., Cal.) and supported by Gen. H. H. Arnold, which would make the WASPS a part of the regular Army. The bill, endorsed by the House Military Affairs Committee of which Costello is a high-ranking member, was slated for early action on the House floor and faced a stiff fight for passage.

The Ramspeck report revealed that the Army's ultimate plan is to increase the WASP strength to 5000, at a Government cost of $100,000,000.

Instead of following through with this plan, the report recommended that the service of experienced air personnel, many of them CAA-trained, be "immediately utilized." Transitional training, where necessary, to further qualify these men for "the hotter and heavier ships" can be accomplished at a "fraction of the cost contemplated" in the proposed WASP program, the report declared.

May Use Those Trained

The use of WASPS already trained and in training should be continued, the report said, and provision made for hospitalization and insurance.

The report suggested that the Army draw its service pilots from the following available groups of training and partly trained air personnel:

"1. Civilian instructors now released, or to be released, through curtailment of the Army Air Forces primary training schools.

"2. Civilian instructors now released, or to be released, through the liquidation of the Civil Aeronautics Administration-War Training Service program.

"3. Instructor-trainees of the Army Air Forces, either wholly or partially trained for the Army Air Forces by the CAA-WTS training program, who, notwithstanding this costly and highly technical training, have been returned to the walking army or to ground crews or assigned other duties having no relation to the training for which millions of dollars of public funds have been spent.

"4. Student trainees of the Civil Aeronautics Administration-War Training Service program who, at varying stages of their training, have been returned to other duties not connected with the purposes for which they were trained, and who, with transitional training, would be more quickly made available than new recruits.

"5. Army Air Forces commissioned instructor personnel of the Air Forces Training Command now released for other assignments because of the curtailment of the cadet training program. Many of these instructors, because of over age, or for other reasons, will not be assigned to combat duty.

"6. Commissioned personnel of the Army Air Forces returning from combat areas who have either completed their missions or, having been wounded or otherwise battle-marked, are nevertheless qualified for service pilot duties.

"7. Noncommissioned personnel of the Army Air Forces whose experience and performance merits consideration for pilot or transitional training, and whose services would be more quickly available than those of new recruits.

"8. Recently commissioned Army Air Force pilot personnel who desire and need further air hours and experience before being sent to combat or foreign operational duty.

"9. Army Air Forces personnel now assigned to administrative duties in the United States and elsewhere who, although in flight pay status, are actually engaged in administrative, consulting, liaison, and contact duties for which payment of flight pay was not contemplated and which, in many cases, could well be done by nonflying officers, AirWacs, or civil-service personnel.

Fitch Succeeds McCain

Vice Admiral Aubrey Fitch, who commanded aircraft in the South Pacific for nearly two years, has been named Deputy Chief of Naval Operations for Air, succeeding Vice Admiral John S. McCain, whose new assignment, dependent on the war situation, has not been disclosed. Admiral Fitch has been active in the Pacific since April, 1940. He commanded the carrier task forces in the battle of the Coral Sea and was on the carrier Lexington when it was lost in that battle. He commanded the air forces that initially drove the Japs out of the South Pacific and has headed the New Zealand air forces.

Change Route to New Guinea

The Air Transport Command is planning to shorten the air route from the United States to New Guinea by charting it from the U. S. to Hickham Field through the Marshall Islands. This route would cut four to five hours from the flight time, ATC says. Average flight time between the two points since February 26, when the line was re-routed via Hawaii, has been 41 hours with Douglas C-54s carrying from 8,000 to 11,000 pounds of cargo or 27 passengers, including a crew of six.

British Honor Wright With Engineer's Degree

Orville Wright became the third American in history to receive a degree from the British Institute of Mechanical Engineers recently in a ceremony in the British Embassy at Washington. Dr. H. N. Gates, president of the American Society of Mechanical Engineers, accepted in the absence of Wright an honorary certificate from the British Institute. Lord Halifax, Ambassador to the United States, made the presentation.

Hershey Clarifies Right of Veterans To Re-employment

An interpretation of veterans' rights to re-employment under the provisions of the Selective Service Act has been issued to local draft boards by National Director Hershey. The local boards were ordered to report to national headquarters any cases where qualified veterans are refused re-employment, so that the Department of Justice may proceed to compel their reinstatement.

Hershey explained that a veteran's priority rights accumulate throughout his active duty in the Armed Forces and that a veteran is entitled to reinstatement in his former position or "one of like seniority, status and pay," even though such reinstatement necessitates the discharge of a non-veteran with greater seniority. Veterans' applications for reinstatement must be made within 40 days of discharge.

"If, upon a veteran's return from military service, he finds that his employer has entered into employment agreements with other setting up conditions of employment different from those which existed at the time the veteran left, the veteran cannot be deprived of his reemployment rights by reason of these agreements," Hershey asserted.

Thunderbolt Packs a New Wallop

Bad news for the enemy recently has been this newest version of the Republic P-47 Thunderbolt fighter-bomber. New silhouette, round-the-clock visibility for pilots through electrically operated "bubble" canopy, several hundred more horsepower, and increased internal fuel capacity doubling fighter range are among the new features. Bomb loads up to one ton are carried.

Ryan to Call Parley of U.S. Group to Activate CAPA

OSWALD RYAN, member of the Civil Aeronautics Board and newly named chairman of the U. S. National Commission of the Permanent American Aeronautical Commission (CAPA) will call a meeting of the U. S. Commission in the near future.

CAPA which embraces in its membership 13 countries in the western hemisphere was organized at the Lima, Peru, Pan American aviation conference in September, 1938. The United States soon thereafter named members to the U. S. National commission but due to the start of the European war, CAPA never functioned as an international organization and hence the U. S. Commission never got underway.

13 Countries Included

The new members of the U. S. commission are directly and indirectly connected with aviation. The industry generally is attaching considerable significance to the caliber of the men chosen. In addition to Ryan, the State department announced the names of the other members as follows:

William A. M. Burden, Assistant Secretary of Commerce; Lieut. Col. Louis A. Johnson, former Assistant Secretary of War; Arnold Knauth, Department of Justice, specialist on Admiralty and Shipping law; Stephen Latchford, State Department advisor on air law; Stokeley W. Morgan, chief of the Aviation Division, State Department; Theodore P. Wright, director of Aircraft Resources Control Office, War Production Board; Rep. Alfred L. Bulwinkle (D., N. C.)—Chairman of the Aviation sub-committee of the Interstate Commerce Committee of the House and Sen. Bennett Champ Clark, (D., Mo.) Chairman of the Aviation sub-committee of the Senate Commerce committee.

In addition to the United States, the following countries are members of CAPA: Argentina, Bolivia, Chile, Colombia, Cuba, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Peru and Venezuela.

According to the resolution passed at the Lima conference, CAPA expects to accomplish (a) The gradual and progressive unification and codification of international public and private air law; (b) The coordination and development of mutual interests in technical subjects related to aircraft, pilots, airways, and facilities for air navigation, including airports and operation practice and procedure; (c) The organization and marking of inter-American air routes and the possible coordination of local air services as between themselves and in relation to the services of international air lines.

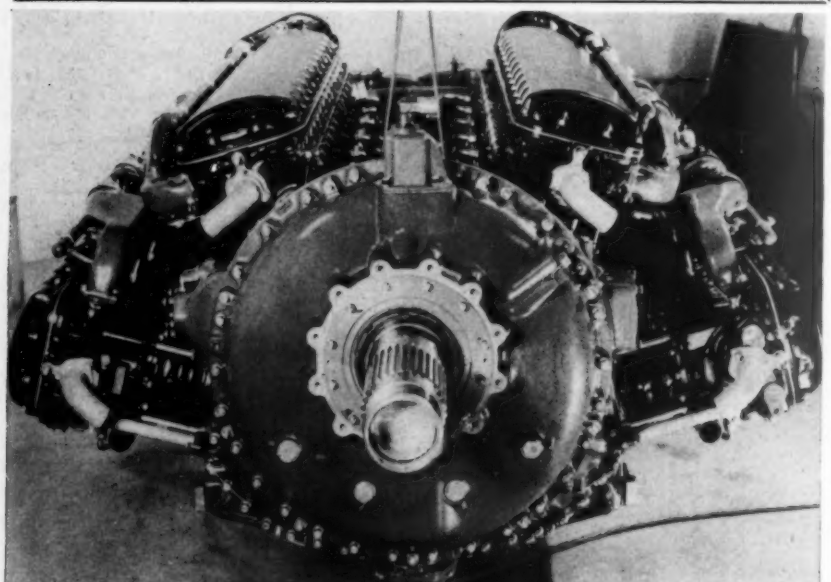
Standardization Needed

It is understood that after the U. S. Commission has decided on a list of subjects that are susceptible to uniform treatment, they will be submitted to the international body on an informal basis to be followed possibly by international conferences later.

Need for activating CAPA, Ryan stated, has grown out of the recent activity among airlines and steamship companies which are seeking routes between the United States and the Latin American and Caribbean area. There are also applications on file with CAB of foreign carriers desiring permits to come to the U. S.

Knowledge of the fact that standardization of controls, flight procedures, navigation equipment and other technical phases of aviation will be necessary in the interests of successful international aviation, prompted the efforts to activate CAPA at this time.

New Engine Boosts U. S. Striking Power



Three thousand horsepower in this new Allison 24-cylinder liquid-cooled engine will give U. S. aerial fighters the most powerful aircraft power plant in the world. The new engine will be installed in single-motor fighters still on the secret list. It has twice the piston displacement of the present Allison 12-cylinder engine.

Creation of Aviation Groups Sought For All Cities and Towns

Formation of aviation committees in "every city and town" of New England was advocated recently by J. Burleigh Cheney, chairman of the aviation committee of the New England Council, in an address before an aviation conference in Concord, N. H.

"I suggest particularly, that in the case of several small towns, located close together, they form sectional, or township or community committees," Cheney said. "These committees should coordinate their activities through the various Chambers of Commerce, and civic clubs, state aeronautic commissions, planning commissions, and other governmental agencies to the end that there will be a network of ground services to accommodate aircraft."

Connecticut already has 26 and Rhode Island six such committees, he revealed.

Cheney warned against immediate construction of "expensive, highclass airports."

"Leave grass on your fields, enough for light and heavy planes to land on in proportion to the amount of traffic available at the beginning," he suggested. "From time to time, as traffic increases and a greater need develops, you may determine whether you want one or more dirt runways, or two or three paved runways. Runways 5,000 or 6,000 ft. long certainly should not be contemplated until such time as the quantity of traffic demands and can afford to pay for it."

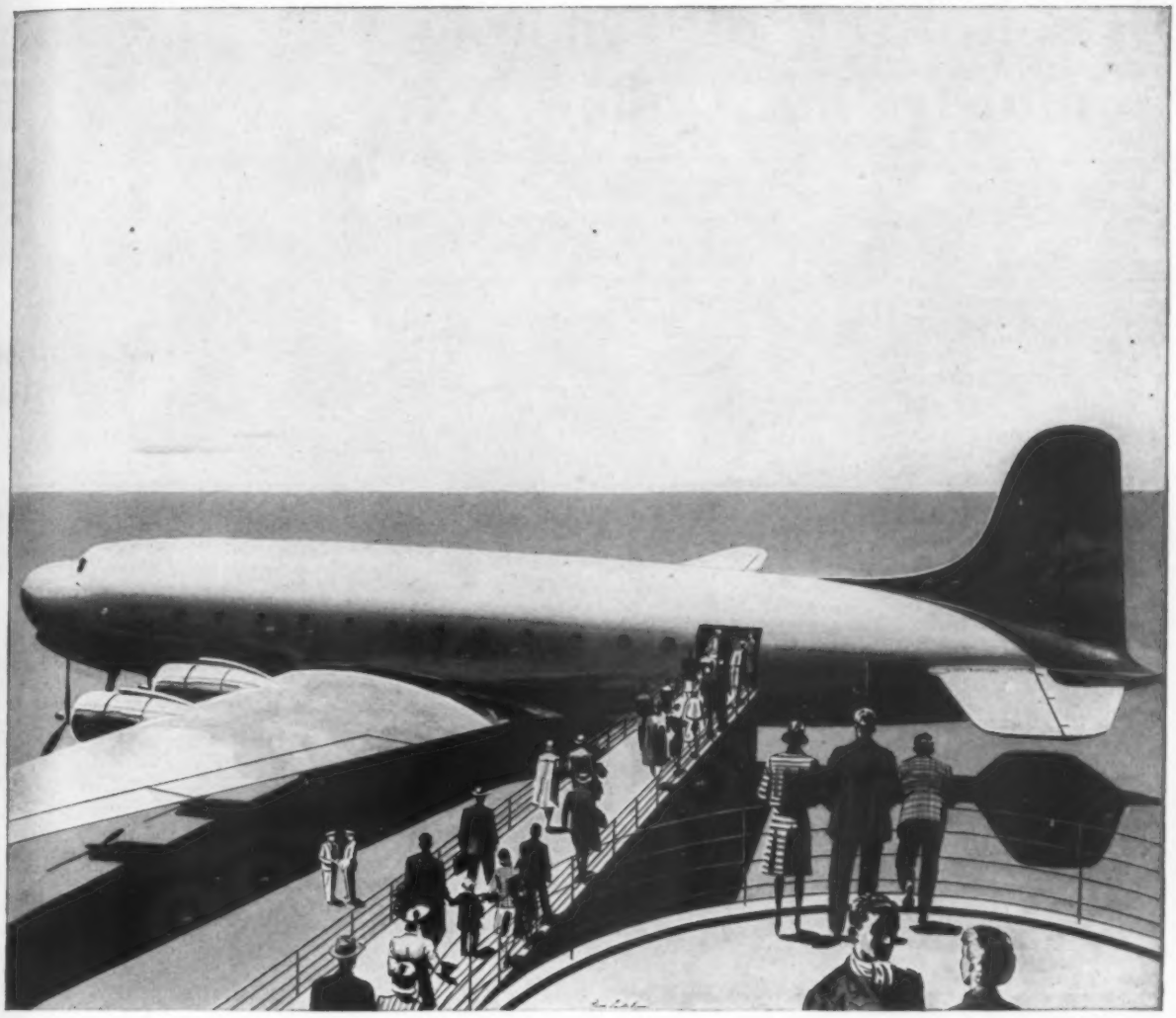
Cheney made four comprehensive recommendations for New England aviation planners:

1. "All the airports that you can possibly support economically in the communities that *actually need them*, to provide for commercial, scheduled, local feeder, or trunk line air services.

2. "All possible landing fields, conveniently located, that will economically serve your non-scheduled private flying.

3. "Organization of each state into a group of cities and towns who will work together and develop a plan for a statewide local network of intrastate air service as well as east-west and north-south air service. This organization should be in full cooperation with neighboring states.

4. "Obtain the services of existing carriers who have applications pending, as well as carriers who have not yet made application."



"All aboard" in the *Age of Flight*

"All aboard! United Mainliner, 'The Continental,' for Chicago, Denver, and the Pacific Coast. Connections for Honolulu, Manila, Singapore, Mandalay, Calcutta and Bombay."

ROMANTIC, far-away places that once took weeks and months to reach . . . cities so remote that only occasional travelers ever visited them . . . will be regular stopping places on the world-wide airline networks of the future.

None of them—anywhere—will be more than two and a half days away from your own home!

You will probably visit these places in the Age of Flight, and so will many of your fellow countrymen. You will be able to travel because travel itself will take so little time, and all kinds of transportation will be so vastly improved.

This will be particularly true of travel in the United States. Service on United's Main Line Airway, for example, will be so frequent and so convenient that you will be able to fly to any city across the country in a few hours, practically any time of day or night. No section of the nation will be more than 11 hours from wherever you may happen to be. And air travel will be more economical, too.

This glorious day of aviation cannot begin until Victory is won. When the Axis is finally defeated, United, the nation's pioneer air transport system, will utilize its background of experience, resources and leadership to provide even faster and finer air service. You and many more will take to the skies as never before.

All will be aboard in the Age of Flight!

★ *Buy War Bonds and Stamps for Victory*

UNITED AIR LINES

THE MAIN LINE AIRWAY

Streamlining of Chamber Administration Under Way

ADMINISTRATIVE streamlining of the Aeronautical Chamber of Commerce, conforming largely to the successful operating pattern of the Aircraft War Production Councils, is well under way.

Under the direction of John C. Lee, who has resigned as manager of AWPC for a three-month assignment to reorganize the administrative machinery, and Eugene E. Wilson, vice chairman of United Aircraft Corp. and chairman of the Chamber's executive committee, preliminary reorganization is moving swiftly along lines mapped out at the recent Los Angeles meeting of the Board of Governors.

Principal objective is to create an effective agency to carry out the manufacturers' program under the direct control of the presidents of the companies most concerned. These presidents now constitute the Board of the Chamber and will meet monthly through two regional executive committees paralleling the Board and operating as the Aircraft Manufacturers Council of the Chamber.

Departments Reduced

The East Coast Executive Committee, under the chairmanship of R. E. Gillmor, president of Sperry Corp., and the West Coast Executive Committee under Harry Woodhead, president of Consolidated Vultee Aircraft Corp., will meet the latter part of this month.

Reduction of over-departmentalization of the Chamber is one of the basic undertakings in the reorganization. Previously the Chamber has had 10 departments and a consolidation of previous departmental categories has been effected.

The Aircraft Manufacturers Council will emerge as the major operating department, directing and being serviced by the Service Bureaus. The Personal Plane Department is expected to attain the status of a council.

With creation of the Manufacturers Council, major operations of the Chamber fall into a pattern of service and representation for three groups:

1. Aircraft Manufacturers Council—representing the companies whose primary manufacturing interest is military and commercial aircraft, within most cases; a secondary interest in personal aircraft.

2. Personal Aircraft Council—representing those companies primarily interested in the development of the personal airplane.

3. Miscellaneous aeronautical businesses—representing those companies whose primary interest is that of vendors of merchandise or service to those who make or operate airplanes.

Organizational Changes

Organizational changes being effected include:

The Economic Development, the Research and Statistics, the Legislative, and the Information Departments are consolidated as a Service Bureau. This bureau will carry on economic research and development, statistics, legislative liaison and information work of the three former departments. Staff members will have generally the same functions as previously carried on in the departments.

Public relations activities will be handled by a service bureau which is staffed by Hill & Knowlton, with D. R. Mockler as resident representative.

No present organizational change affects the largely self-contained Technical, Traffic and Industrial Relations Research units.

Keeping Up With the Clock

The Aeronautical Chamber of Commerce has established a new schedule of office hours to better serve the West Coast area and the Central region which heretofore have had service only a portion of each day because of the difference in time.

New office hours will be 9 A.M. to 8 P.M. From 6 to 8 P.M. the staff will be skeletonized to consist of a minimum of one secretary and one staff member capable of handling the service inquiries from member companies.

Saturday hours will be 9 A.M. to 6 P.M.

ATC World Routes Total 135,000 Miles

The Air Transport Command, entering its fourth year, has become the world's largest air transport and ferrying system in the world. On the third anniversary May 29 its regular air routes within the United States and abroad totaled 135,000 miles.

"The aid of commercial companies, such as airlines, petroleum firms and other independent firms, was vital to the success of the Command's operations and such aid and cooperation as requested was given without limit," the War Department stated. More than 200 new transports have just been made available to the ATC to enable its expansion to continue.

ATC's record includes the safe delivery in 1943 of 99.7% of all planes ferried. In April, 1944, it flew 29,000,000 miles in ferrying of military personnel and during March 60,000 passengers were carried. In 1943, ATC returned 3260 sick and wounded men from foreign theatres and in 1944 has already brought back about 4000 more.

Largest of the Command's nine wings is the India-China Wing which daily schedules more flights than does La Guardia Field. Other wings are the Pacific, Alaskan, Caribbean, North Atlantic, South Atlantic, Central African, North African and European. Transport and cargo operations are carried on in converted passenger planes and converted bombers; principally, the C-47 Skytrain; C-46 Commando; C-54 Skymaster and C-87 Liberator.

Oklahoma City Names Acker Air Consultant

Steadham Acker, nationally known manager of the Birmingham, Ala., municipal airport and founder of the National Air Carnival at Birmingham, has been appointed aviation consultant for Oklahoma City.

Acker

The city council created a seven-member aviation commission as a department of city government, and followed the new board's recommendation in the appointment of Acker.

Acker, with broad experience in aviation and airport operation, plans to formulate broad principles upon which Oklahoma City's air transportation can be based and advise the new aviation commission.

He has done considerable work as advisor to various municipalities on airport and aviation planning. He will aid Oklahoma City again this fall in conducting the National Aviation Clinic, being clinic director there for the event which will be held Nov. 15, 16, 17 and 18.

Acker was a guest of honor at a dinner in Oklahoma City, May 26, which was addressed by Charles I. Stanton, administrator of civil areonautics.

Air Cargo Luncheon Planned

The First National Air Cargo Packaging Luncheon has been scheduled by the Aviation Section, New York Board of Trade, for June 23 at Hotel Pennsylvania, New York. Airlines, shipping companies, packaging, processing, and coopering companies, as well as express companies, warehousemen, and others interested in air cargo packaging, are expected to send delegates.

1000 Expected at Parley

Over 1,000 delegates are expected to attend the West Virginia Aviation Forum, to be held in Charleston, W. Va., June 26, to engage in practical discussions on postwar aviation planning.

NASAO on Record for Uniform State Regulation of Air

The National Association of State Aviation Officials went on record at its meeting during the past fortnight in Washington in favor of uniform state regulation of aeronautics.

Construction of airports should be handled through state agencies, as should licensing of airports, NASAO stated. Pilot certification and air worthiness standards should be handled by the federal government, it added.

The Association also went on record as being in "complete accord with the program of the National Aeronautic Association."

Preview of a new Bell Fighter*

* *Described by the Office of War Information as "A new Bell fighter, now in production, with a low drag wing and a two stage, supercharged Allison engine which will make it an efficient plane at any altitude up to 38,000 to 40,000 feet."*

When the Axis powers get their first view of this U. S. Army fighter, just beginning to come off the production lines in our Niagara Frontier plants, they'll see it as a slim, trim, single-engine plane. They'll learn next that it has blinding speed... that it can fight effectively high in the sky... or blast troops and tanks from tree-top level. Like the Airacobra, "Cannon on Wings," this plane has plenty of firepower. It throws a paralyzing barrage of machine gun bullets and cannon shells.

Manufacturing this new fighter is one part of Bell Aircraft's war job.

Now add four more chapters—(1) building flexible gun mounts for planes and surface ships; (2) designing and building America's first jet propelled plane; (3) developing the new Bell Helicopter; (4) producing bombers in Georgia—and you have the complete story of Bell Aircraft's war effort.

Yes, Bell is concentrating to speed the day of peace. And the lessons we're learning today mean that you can aim *high* when you think about post-war aviation. © Bell Aircraft Corporation.

MEMBER AIRCRAFT WAR PRODUCTION COUNCIL—EAST COAST, INC.

BELL *Aircraft*

PACEMAKER OF AVIATION PROGRESS

Niagara Frontier Division, Buffalo and Niagara Falls, N. Y.—Ordnance Division, Burlington, Vt.—Georgia Division, Marietta, Ga.

BUY WAR BONDS AND SPEED VICTORY

THAT OUR COUNTRY MIGHT *Out-Produce* THE ENEMY

Hundreds of Peacetime Producers Mobilized by CURTISS for Victory

Convert or quit! That was war's ultimatum to a great many American manufacturers. Thousands of them had scarcely digested this, "Get into war work or get out of business" edict before Curtiss-Wright representatives were at their doors.

We offered them, as Curtiss-Wright subcontractors, a way to survive . . . a means of contributing to the war effort . . . a method of holding their organizations together until they could return to peacetime products.

Into each plant came Curtiss-Wright men to help solve complicated conversion problems—to assist in installing new machinery, training workers, mapping schedules, meeting quotas.

Thus did Curtiss-Wright, by the speedy organization of a vast subcontracting system, not only protect hundreds of small manufacturers from finding their businesses listed among the casualties of war—*but—took a stride that quickened the production of vitally needed aircraft and vastly accelerated America's war effort!* LOOK TO THE SKY, AMERICA!

Another Contribution of

Curtiss-Wright Corporation

AIRPLANE DIVISION

Toward Winning This War

BUFFALO · COLUMBUS · ST. LOUIS · LOUISVILLE

Member, Aircraft War Production Council, East Coast, Inc.

Underwriters See Flaws In CAB Insurance Report

A HIGHLY CRITICAL analysis of the Civil Aeronautics Board study on Aviation Insurance has been announced by the United States Aviation Underwriters, Inc., one of three groups which has written a high percentage of aviation insurance in recent years.

The CAB report in March, recommended that the Federal government set up one agency for the collection and dissemination of information on all phases of aviation insurance. The report suggested that the underwriting groups have regularly tended to fix rates at too high a level.

The analysis by Aviation Underwriters, which is signed by David C. Beebe, chairman of the Board, seeks to discredit much of the CAB report on the grounds that it is filled with inaccuracies. Because many of the conclusions are based on what is claimed to be an erroneous set of facts and figures, Beebe asks the Board to incorporate the comments of his group into the Board's report "so that all of the relevant facts are correctly and fully presented to the members of the Board, members of Congress and the aviation industry."

Beebe's report not only makes a vigorous defense of the New York Insurance department record but in addition it charges as being unjust the Board's assertion that because of jurisdictional weakness the New York supervision over airline insurance has kept its supervision of non-airline insurance from being effective and vigorous. Four times on the opening page the phrase "It is not true" appears with reference to the Board's findings on the question of adequacy of supervision.

Profit Figures Explained

"Any limitations which may have existed in such supervision has not been due to any jurisdictional weakness but to the considered judgment of the New York State department, based on its many years of experience in the regulation and supervision of the insurance industry, as to the amount of regulation and supervision at present needed, the Underwriters assert.

With reference to excess profits, the Underwriter's report cites the Board's figure of 2½% for "catastrophe loading" is an estimate made by the examiner and not the actual cost of excess reinsurance, that Canadian premiums and losses of one group have been included and the same premiums and losses of another group have been excluded, that written premiums of one group have been included and earned premiums of another, that expenses of one group in "general expenses" are not complete.

"In view of these inaccuracies, little reliance can be placed upon the experience figures set forth in the report, or in the conclusions drawn therefrom. They are hardly a sound basis for the statements in the report as to the ration of expenses to premiums, or that the percentage of premiums available for profits was substantial, that 25.9% of premiums was available for profits, that profits 'were undoubtedly very high' and that 'such a generous margin of profit from airline accounts . . . suggests that the underwriting groups have regularly tended to fix the rates at too high a level, etc.," the Underwriter report stated.

The report added that even if the figures were inaccurate, the conclusion with reference to excessive rates is not justified. Lumping of the experience of the three groups and averaging of eight years' experience create an entirely false picture of the problems which were faced by the underwriters.

"In the case of our passenger liability insurance of domestic airlines in existence Dec. 31, 1942, for example, for the policy years 1934-1942 four out of the first five years produced a loss, and the next year, 1939, in which there was no major accident, produced a profit of 50% greater than the total profits of all other profit years combined. The profits derived from this class of business in 1939 were in excess of the total profits of the entire nine-year period. Our loss ratio varied during the period from .95% to 119.01%" it was stated.

Called Unfair Comparison

The experience figures for nine years was listed in the Underwriters' report as follows:

Policy year		
1934	$40,535.31	(loss)
1935	41,021.73	(loss)
1936	70,933.19	
1937	107,852.49	(loss)
1938	63,107.93	(loss)
1939	290,287.08	
1940	37,675.69	
1941	72,304.77	
1942	8,800.53	
Profit	227,483.80	

The Underwriters also criticize the Board's report for using plane miles instead of passenger miles in making its comparisons. While plane mile insurance costs rose from 2.2 cents per mile in 1941 to a high of 2.7 cents per mile in 1943, the Underwriters' report points out that airline passenger revenues reported in the Civil Aeronautics Journal and the insurance costs and total operating expenses shown by the report, shows that flying liability and compensation insurance costs were reduced from four cents to 1.88 cents per passenger revenue dollar from 1938 to 1943 and total insurance costs increased in these years only 47% as against 113% for all other expenses while passenger revenues increased 212%.

In answering an inference in the Board's report that there has been a lack of competition because the three groups have largely divided the business, Beebe lists some 18 companies and groups of companies that were in the competition sometime between February of 1920 and October of 1941. He insisted that competition has been keen, even among the three groups that have written a large percentage of the business.

Contradicting the claim that the three groups have divided the business on a relatively equal basis, Beebe submits percentage tables, one of which shows that the so-called Aero group wrote 24.95%, the Associated group 34.61% and the U. S. Aviation Insurance group 40.44%.

In support of the contention that there has been no arresting of the decline in the percentage of premiums going abroad for reinsurance, the Beebe report supplies the following figures:

Policy years	To Dec. 31, 1942 Hull %	Casualty %
1938	30.51	43.36
1939	27.60	44.80
1940	18.21	41.78
1941	18.11	29.17
1942	16.13	27.24

Dangers Discredited

Beebe's report discredits the possible dangers raised by the Board's report due to foreign participation. He points out they have no voice in the selection of risks, that actual sale of airplanes to foreign countries or officials publications of the Department of Commerce and Agriculture are a much more prolific source for information, if such be desired.

He argued for a degree of reciprocity between insurance companies of various nations lest an insular, nationalistic attitude be met with retaliatory measures which would be harmful to America's participation in the field of international aviation.

The CAB report, which explains some of the difficulties encountered by the Board's examiners in obtaining information, stated: "The data which have been collected on a voluntary basis, however, leave much to be desired. Much of the pertinent information was given the Board only on condition that it be held in confidence. This restriction makes it difficult to discuss adequately some of the complex problems involved in the present aviation market."

Admiral Gets Fast Trip

A new record for transport flights between Pearl Harbor and Washington was set this month by a Navy plane taking Vice Admiral John H. Towers, deputy commander in chief of the Pacific Fleet, to the capital.

The four-engined transport made the 4,945-mile trip in 26½ hours of which 25 were in the air. Only one stop was made, at Albuquerque, N. M., after winging 3,295 miles from Hawaii.

Insurance Language Changed

Connecticut General Life Insurance Co. has adopted a complete change in the language of its application clause referring to flights in scheduled commercial airline operations. In its old application form, the company asked the prospective policy holder whether he had, during the past year, taken "an aerial flight as a fare paying passenger on a commercial airline." In its new form Connecticut General asks whether the applicant has taken or contemplates taking "any aerial flights other than as a passenger on a commercial airline."

U. S. Builds 200,000 Planes Since 1940

Aircraft Industry Three-Fourths Size of All Manufacture

MORE THAN 200,000 aircraft have been produced in the United States since January, 1940, by an industry which today is three-fourths as large as the combined U. S. manufacturing industries four years ago. May production of 8902 planes brings the total since Pearl Harbor to 180,159 with a total airframe weight of 1,534,000,000 pounds.

A summary of aircraft production progress released by Charles E. Wilson, Chairman of the Aircraft Production Board and T. P. Wright, Director of the Aircraft Resources Control Office, illustrates not only the industry's rapid growth but the present trend toward stabilization of production by numbers while production by weight continues to climb. From 267 planes produced in January, 1940, to the output for March, 1944 of 9117, the industry has expanded production 3400%.

Weight in January 1940 was 1,500,000. In May it reached new high of 104,000,000 pounds, an expansion of 6800%. More significant is the comparison between March's production of 9117 planes weighing 101,400,000 pounds and May's total of 8902 planes weighing 104,000,000 pounds.

The trend toward increased weight, which has risen from an average of 3600 pounds in 1940 to about 10,000 pounds per plane in 1944, reflects the changed emphasis on most needed types. In 1941, 48% of the output was in trainer planes. Today it is only 8%. Although no breakdown by types was given for May, only 778 trainers were produced in April compared to the peak of 1862 in April, 1943.

About 77% of present monthly output is concentrated on combat planes, with combat and transport types together equalling 87% and an additional 4% allotted to special purpose planes. Aircraft Production Board statistics reveal that 43,911 of the year's projected total of 100,000 planes already had been built in the program which is expected to cost $21,300,000,000.

Engine horsepower increased 6½ times, from 6,000,000 in December, 1941 to 39,200,000 horsepower in March, 1944. During the same period, airframe weight expanded eight times from 12,000,000 to 101,400,000 pounds. Average horsepower per engine was 850 in January, 1941 and 1300 in March, 1944.

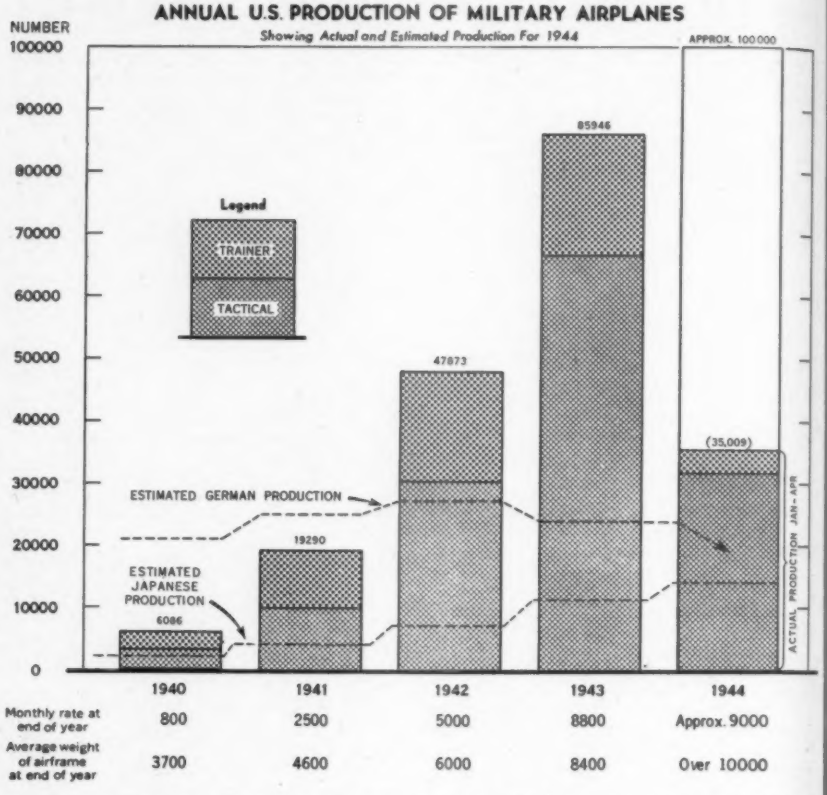
About 31% of the total munitions program this year—costing $69,000,000,000—will be devoted to aircraft, the APB statement emphasized. The yearly cost of our aircraft program from 1941 to 1944 is summarized below, together with the annual number and weight of new planes:

Whereas the industry, including airframe, engine and propeller industry subcontractors and accessory manufacturers, employed 85,000 persons in January, 1940, current employment was 2,100,000 employes at the end of 1943—a 2400% expansion. U. S. manufacturing industries in 1940, employed only 4,100,000 workers compared to aircraft and subsidiary industries' payroll today of about 3,000,000. Employment of women has jumped from an insignificant number in 1940 to 720,000 in March, 1944—about 36% of all employes.

Output per employe has also raced ahead from 23 pounds a month in January, 1940 to 73 pounds a month in the first four months of 1944. In 1940, it took 156 workers a month to produce one plane weighing 3600 pounds, while, in 1944, it requires only 137 workers one month to produce a 10,000-pound plane.

This increase in labor productivity is illustrated by the fact that the first four-engine bomber in one plant took 200,000 manhours to produce but only 10,000 manhours were required for the 4500th plane. A fighter plane took 35,000 manhours for an early model and only 4500 for the 3500th plane. Costs have similarly declined. For example, in 1942 a four-engine heavy bomber cost $500,000, which today costs only $250,000. An early model of a fighter plane cost $70,000 but can now be produced for $50,000.

Total aircraft production of 203,106 planes in the past four years is broken down into monthly figures in the following chart, released by the Aircraft Production Board:



The degree with which U. S. production of military planes has skyrocketed since the start of the war, which has left the enemy's estimated output far behind, is shown in this chart. The U. S. got off to a late start as compared with Germany, however, producing only 1,150 planes in 1936 while Germany built 5,000. In 1938 the U. S. built 1,800 and Germany turned out 10,000.

	Total Value of Aircraft Output	Number of Planes	Total Airframe Weight
1941	$ 1,765,000,000	19,290	85,700,000
1942	6,285,000,000	47,873	292,600,000
1943	13,800,000,000	85,946	743,000,000
1944	21,300,000,000	100,000 (scheduled)	1,250,000,000

Mo.	1940	1941	1942	1943	1944
Jan.	267	1,016	2,980	5,013	8,789
Feb.	266	962	3,099	5,453	8,790
March	298	1,155	3,497	6,264	9,117
April	376	1,388	3,501	6,472	8,343
May	480	1,331	3,989	7,114	8,902
June	602	1,477	3,734	7,094	
July	561	1,461	4,109	7,373	
Aug.	528	1,853	4,281	7,612	
Sept.	515	1,914	4,307	7,598	
Oct.	617	2,273	4,063	8,362	
Nov.	737	2,051	4,812	8,789	
Dec.	839	2,429	5,501	8,802	
	6,086	19,290	47,873	85,946	43,911

For war today...for all flyers tomorrow!

EVEN the best grades of aviation gasoline generally available only a few years ago wouldn't be worth a hoot to a modern plane in combat.

In fact, the performance of the mighty engines of these planes is only made possible by development of an entirely new fuel.

You know it as "100-octane aviation gas." But it is actually considerably higher in performance value—a true super-fuel and super-difficult to make.

Yet oceans of this new super-fuel *are* being made, right now. Every refinery shown here is doing its part. So far in the war, *one in every four* British and American combat planes has flown on aviation fuel from these refineries.

Known as "fluid catalytic cracking units," they are designed around special processes developed by Esso. What they do to petroleum sounds almost like magic even to an oil chemist.

It is simple truth that no process or company in the world, so far as we know, has ever surpassed the products these plants can turn out.

Today, of course, this wonderful new fuel must all go to war. But when the war is over, these new plants will still be here—your guarantee of the finest fuels in human history for your post-war planes!

THE FIRST "E" AWARDED TO PETROLEUM RESEARCH WORKERS
was made to Esso Laboratories, Bayway, N. J.

(THIS MESSAGE HAS BEEN REVIEWED IN FULL BY THE ARMY AND NAVY, WHICH HAVE NO OBJECTION TO ITS PUBLICATION)

50 DC-4s to Be Ordered For Canadian Airlines

Average Cost Put At $350,000 Each; Companys' Fee 2%

THE Canadian government will order 50 Douglas DC-4s from Canadian Vickers Ltd. for postwar use on the Canadian airlines, each plane to cost $350,000, C. D. Howe, Canadian Minister of Munitions and Supply, revealed to the House of Commons recently.

Correspondence on the deal between the government and the manufacturer was tabled in the House, and Canadian news reports indicated that the contract had not been signed at that time. The correspondence represents the basis on which the contract will be drawn, it was said.

The following details were given:

(1) 50 DC-4s will be covered in the contract (including spare parts to a dollar value of 25% of cost of the airplane), to be built on "the basis of an average target cost of $350,000 each." The government will have the option of increasing or decreasing the number of planes to be built, subject to "reasonable adjustment of the target cost figure."

(2) Company's fee, based on this cost, will be 2%.

(3) "Target cost" is based on the C-54A, as defined in the contract and specifications between the U. S. Army Air Forces and the Douglas Aircraft Co. and which defines equipment to be furnished to Douglas as "free issue."

(4) DC-4 and C-54A specifications differ, so target cost "will be adjusted upwards or downwards by agreement to represent the difference in cost between the two aircraft" and "and/or all modifications to be incorporated after this adjusted figure on the DC-4 is settled, will call for further adjustment to the target cost."

(5) Not included in target cost computations are Canadian duties, sales tax and war exchange tax on materials, equipment, parts and components imported from the U. S. These will be charged separately.

(6) The first plane is to be delivered "FAF Cartierville airport within 13 months after receiving such drawings and engineering data as Douglas Aircraft Co. . . . can make available from existing drawings."

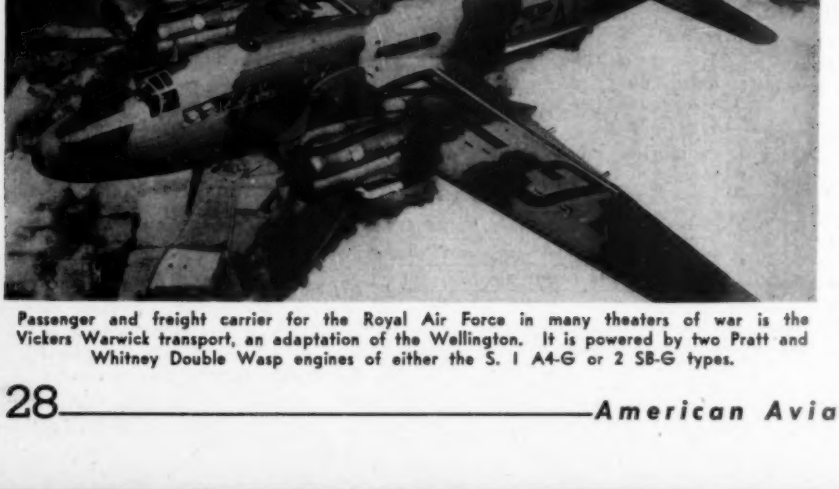
(7) If actual costs are higher than target cost, the company's fee "will decrease by one tenth of 1% for each $10,000 of such increase." If costs are lower, the fee will increase by the same amount.

(8) Tooling costs will not be included in fixing target price and these will be paid for separately on the basis of actual cost without profit or fee.

(9) The government will make available its airplane plant now operated by Canadian Vickers for the purpose of the contract and to the extent that it is not needed for government war work.

Commenting on the deal, the *Financial Post* stated that "the agreement appears to call for a straight 'cost plus' contract which the company undertakes in a plant supplied wholly at government expense. The 'target cost' arrangement seems to have meaning only to the extent that it is a basis on which to estimate the rate of the company's fee'."

Warwick in Service With RAF



Passenger and freight carrier for the Royal Air Force in many theaters of war is the Vickers Warwick transport, an adaptation of the Wellington. It is powered by two Pratt and Whitney Double Wasp engines of either the S. 1 A4-G or 2 SB-G types.

British Leader on Tour Of U. S. and Australia

Sir Oliver E. Simmonds, chairman of Simmonds Aerocessories Ltd., and a member of the British Joint Air Transport Committee, recently flew to the U. S. enroute to Australia.

Simmonds

On his arrival at New York aboard American Export he was greeted by William R. Enyart, president of Simmonds Aerocessories Inc. of U. S. A.

The British Joint Air Transport Committee is an organization comprised of business leaders concerned with postwar international air development.

Britain Produces 27,000 Aircraft In Twelve Months

Great Britain produced 27,000 planes in the 12 months ending March, 1944, the Ministry of Aircraft Production has disclosed. Less than 2,000 planes were produced in 1936, 3,000 in 1938, 8,000 in 1939, and 15,000 in 1940.

"The aircraft produced have been bigger and better year by year, the comparison by numbers alone substantially underestimating the progress actually made," the Ministry observed. "Thus in airframe structure weight, production last year was nearly 200,000,000 lbs. This is over 50 times greater than the weight of airframes produced in 1936, seven times the weight of 1939, and not far short of four times the weight of 1940."

Even the weight figures underestimate the progress made, the report said, "since, pound for pound, the newest British aircraft are superior to those made even as recently as last year."

As in the United States, the increasing proportion of British plane output is of operational types. In the last 12 months only six per cent of the weight of aircraft produced were trainers, compared with 28 per cent in 1940.

The announcement stressed the fact that the British aircraft industry, in addition to producing new planes, does "a substantial volume of repair, having effected major repairs to 18,000 planes last year."

"This large volume of repair work, in addition to repairs and maintenance here and overseas, done by the services themselves, entails a very substantial proportion of spares. The output of all kinds of spares, including spare components, has increased substantially and is now equivalent to 50 to 60 aircraft for every 100 complete aircraft built," the Ministry said.

Minister of Production Oliver Lyttelton in a statement to the House of Commons March 8 revealed that total British aircraft production since the beginning of the war had been 90,000 planes of all types.

MIRACLE RESCUE

...a Story of Truk

Jap fliers had spotted our fleet far out at sea on that memorable mid-February afternoon. Truk—chief stronghold of the Nips in the Carolines—was warned and ready. But our Naval strategists had planned carefully for Victory. Our task force closed in resolutely for the initial blow at the powerful Jap base . . . a smashing pre-dawn attack which was to put 23 enemy ships and 201 of his planes out of this war for good!

As our fighters and dive bombers swooped down into the murky haze of the Truk lagoon, they were met by deadly flak from rows of enemy ships and shore batteries. The fighter plane flown by Lt. (j.g.) George N. Blair, USNR, daring 22-year-old pilot from Sewickley, Pa., was hit repeatedly. At 300 feet, Blair felt his engine freeze, his propeller stop. With cool American nerve, he negotiated his landing in the rough waters of the lagoon—the very heart of the Jap island-fortress!

A Hellcat (on wheel gear) goes down fast at sea. So fast, Blair could not retrieve his rubber boat. Treading water with the help of his "Mae West," Blair struggled free from his parachute harness and took stock of his plight. Desperate? Well did Blair know! But his decision proved the mettle of our Navy pilots. He would not swim toward hostile shores. Instead, he would take the *one-in-a-million chance* of a rescue in full view of watching slant-eyes.

The Japs on a destroyer decided Blair was a sitting duck. Twelve times they trained the fire of their 5-inch guns (!) on him before two of Blair's fighter-pilot wingmates could dive their planes to strafe the destroyer. But strafe it they did—set it afire, and turned it back! "It was mighty comforting," said Blair.

For three long hours that seemed an eternity, his spirits rising and falling with each circling and passing plane, Blair drifted about waiting for help to come. Then a Kingfisher whizzed by overhead! The seaplane pilot, at first, failed to spot Blair. But Blair's fighter friends soon guided the Kingfisher to their buddy in the water.

Every minute counted now. The surface of the great lagoon was rough . . . dangerous for a landing. But OS2U-3 pilots are skilled. And Edo floats can "take it." Without hesitation, Kingfisher-pilot Lt. (j.g.) Denver F. Baxter, USNR, of Summertown, Tenn., "bounced in" for a safe landing. With the help of Radioman Reuben Hickman, Blair climbed aboard and crowded into the rear cockpit. The Kingfisher had been stripped of all extra gear—to assure quick take-off with Blair's added weight. Up rose the Kingfisher, now protected by circling fighters. *One of the Navy's most daring rescues at sea was written into the history of the present war.*

Lt. Blair had seen Truk at close hand . . . too close for comfort. But thanks to the resourcefulness of Navy pilots—and the seaworthiness of rugged Edo floats on our Navy planes—he was returned safely to duty. His shipmates call him "the luckiest man in the Pacific."

EDO FLOAT GEAR

SERVES THE UNITED NATIONS

EDO AIRCRAFT CORPORATION, 407 SECOND STREET, COLLEGE POINT, L. I., N. Y.

Traffic to Show Big Gains by 1950, Survey Predicts

Only Small Increase in Planes Seen, C-W Project Discloses

DOMESTIC, international and foreign airlines will have substantial increases in all kinds of traffic in the next several years, but the number of airplanes in service will not increase in the same proportion, according to a study released last fortnight by Curtiss-Wright Corp.

The study, entitled *Air Transportation in the Immediate Postwar Period*, was prepared by B. A. McDonald and J. L. Drew, Business Research Department, Curtiss-Wright Corp. Airplane Division, Buffalo, N. Y.

By 1950, U. S. domestic and international airlines, plus foreign operators (Central and South America, Canada, Alaska, China, South Africa and Australia —"areas which seem most accessible to U. S. manufacturers"—not including Great Britain) will be operating 1,454 airplanes, an increase of only 289 over the 1940 total of 1,165, the study states.

However, domestic mail-passenger-cargo transportation in 1950 will be 897 million ton-miles, compared with 117.5 in 1940, and international air traffic will be 292.1 million against 13.5. Of this latter class, U. S. carriers will transport 188.6 million ton-miles against 13.5 in 1940.

The study points out that equipment will not increase proportionately because (1) planes will have larger seating capacities, (2) average performance will be better. Therefore, it adds, total seating capacities (see tables) is a more accurate indication of growth.

The study assumes a complete Allied victory, end of the European war in 1944, and of the Japanese war in 1945, with 1946 as the first postwar year. Whether events transpire in these years would change dates, but not necessarily estimates, it states.

Postwar Planes Listed

Planes to be used in this postwar period are listed as follows: small feeder plane of 10-15,000 lbs. gross weight; small trunkline plane, 20-30,000 lbs.; intermediate trunk, 40-75,000 lbs.; intermediate trunk, 75-100,000 lbs., and large trunk, 100-150,000 lbs.

In the first year after the war, domestic airline passenger fares should average 4.5c per passenger-mile; by 1947-48 they should be 4 to 4.5c and by 1950 rates of 3.5 to 4c "appeaer quite feasible," the study states.

"At the rate levels indicated, air transport's appeal will still be largely restricted to business travelers and to those in the upper income groups," it says, adding, however, that these rates, together with advantages of speed, frequency, regularity and other factors "justify an optimistic viewpoint with regard to future air passenger travel."

Domestic air cargo rates, assuming combination passenger-cargo planes are used, should drop to 40c a ton-mile by 1946 and 30c by 1950 (including 8c per ton-mile for pickup and delivery), the authors state. Until recently, these rates averaged 80c. In all-cargo planes, future rates may be 10c a ton-mile less, they estimate.

'Surface Agencies' Have Edge

"At the rates indicated, it does not appear that air cargo will be able to compete with surface agencies on the basis of rate in the early postwar years. From the point of view of rates, type of service offered, and type of shipment handled, first-class railway express and parcel post appear to be the principal sources from which traffic may be diverted to air cargo."

In estimating air mail volume (see tables), the authors assume that there will be no surcharge, and that first-class mail will go by air if moved over 400 miles.

Internationally, passenger rates may be expected to average about 7 or 7.5c a passenger-mile immediately after the war, dropping to 5c between the third and sixth postwar years, and going still lower by the tenth year, the study states. This assumes higher mail pay to international operators, and does not consider certain imponderables — uneconomic competition, international subsidy agreements, etc.

"At the rates indicated, the cost of air travel is expected to be about the same as the cost of higher class surface accommodations and slightly higher than the cost of tourist travel," it says. "From the standpoint of service, air transport should offer many advantages over surface travel to all except those who travel principally for the enjoyment of the surface trip. The tremendous time-savings of air travel, the greater frequency of service possible, and the ability to provide direct service to interior points should present great attractions for business and pleasure travel alike. It may be expected that air transport will ultimately develop more new traffic than it diverts traffic from other agencies . . . With declining rates . . . whole new vacation markets should be tapped . . ."

International Rates May Decline

International air cargo rates are expected to decline to about 50c a ton-mile in 1946-48; 40-45c in 1948-50 and perhaps 25-30c thereafter. Prior to the war, rates ranged from 40c to $1.50 and averaged 70c for a 4,000-mile haul.

"At the rates indicated . . . it is apparent that there will be a wide gap between air and surface rates," the study points out. However, it adds that "a fast, flexible transport service can offer important savings in a number of cost and service categories. The realization of these economies is likely to be gradual since it is largely dependent on conditions which may take some time to achieve."

Postwar international air mail rates are expected to drop, and public pressure may force them down to 40c an ounce in 1946 (current average is 60c), 15c in the fifth postwar year and 5c in the tenth, it is stated.

Total Plane Requirements

	No. Planes Required				Type Planes Required				Seating Capacity of Planes Required			
	Domestic	Int'l	Foreign	Total	Feeder	Inter-mediate Trunk	Small Trunk	Large Trunk	Domestic	Int'l	Foreign	Total
1940	338	124	703	1,165	767	378	20	..	6,200	2,000	4,800	13,000
1946	500	126	580	1,206	539	408	259	..	14,000	2,900	8,500	25,400
1948	555	151	660	1,366	616	450	298	2	16,000	3,700	9,600	29,300
1950	571	158	725	1.454	651	477	319	7	16,200	4.500	10,600	31,300

Estimated Postwar Air Traffic
International

	Millions of Ton-Miles							
	Total				U. S. Carriers Share			
	1940	1946	1948	1950	1940	1946	1948	1950
Passengers[1]	11.5	100.0	145.0	247.0	11.5	67.0	92.5	155.0
Cargo	1.2	18.0	22.2	35.5	1.2	13.2	16.0	25.0
Mail	1.0	5.0	6.6	8.6	1.0	5.0	6.6	8.6
Total	13.7	123.0	173.8	291.6	13.7	85.2	115.1	188.6

[1] One ton-mile equals 10 passenger-miles. This assumes a weight (including baggage) of 200 lbs. per passenger.

Estimated Postwar Air Traffic
Domestic

	1940		1946		1948		1950	
	Ton-Miles	% of Total	Ton-Miles	% of Total	Ton-Miles	% of Total	Ton-Miles	% of Total
Passengers[1]	104	89%	470	80%	611	80%	700	78%
Cargo	3.5	3%	38	7%	65	9%	110	12%
Mail	10	8%	78	13%	82	11%	87	10%
Total	117.5	100%	586	100%	758	100%	897	100%

[1] One ton-mile equals 10 passenger-miles. This assumes a weight (including baggage) of 200 lbs. per passenger.

HOW YOU CAN USE YOUR POST-WAR PLANE

Vacation?

Up in the woods where the big ones are biting . . . down on the shore where the tang of the sea fills the air . . . wherever it may be, you'll *fly* to your favorite vacation spot after the war is won. Your own personal plane will take you there, easily, economically, in a fraction of the time required now.

Your post-war plane may resemble the helicopter shown here, or it may be more similar to today's conventional aircraft. But whatever type you choose, specify Franklin power. For 44 years the name Franklin has meant finer air-cooled engines . . . lighter, smoother, more dependable, more economical.

Franklin
FINE AIRCRAFT ENGINES

AIRCOOLED MOTORS CORP.
SYRACUSE 8, NEW YORK

American Aviation Names Russell Editorial Director

W. L. Russell, for eight years executive assistant to the city editor of the *Pittsburgh Press*, has been appointed editorial director of the *American Aviation* publications, it has been announced by the publishers, American Aviation Associates, Inc.

Russell

In addition to *American Aviation*, he will supervise *American Aviation Daily*, *American Aviation Directory* and *American Aviation Reports*.

Upon graduation in 1926 from Iowa Wesleyan College, Mt. Pleasant, Iowa, he joined the news staff of the *Burlington Hawk-Eye*, Burlington, Iowa. Later he joined the *Sheridan Post Enterprise*, Sheridan, Wyoming, and after two and a half years with this paper he became news and telegraph editor of the *Montana Free Press*, Butte, Mont. From 1929 to 1936 he was copy desk and slot editor of the *Denver Post*, and joined the *Pittsburgh Press*, a Scripps-Howard newspaper, on Jan. 1, 1936. Later that year he became executive assistant to the city editor, and has been part-time aviation editor. A member of Sigma Delta Chi and Lambda Chi Alpha fraternities, he is married and has two children.

Montana in Strategic Position on Postwar Routes, Says NWA Man

Montana will be in a strategic location in the postwar network of world air routes, Frank Judd, western regional manager of Northwest Airlines, declared at the first annual Montana Air Clinic, held last month in Great Falls.

Another speaker was Thomas Wolfe, vice-president of Western Air Lines, who predicted that several Montana cities would be "jumping off spots" for northern air routes to the orient. Others appearing on the two-day program were Robert Johnson, of Johnson Flying Service, Missoula, Mont.; Bert Zimmerly, of Zimmerly Air Transport, Lewistown, Idaho; O. S. Warden, a director of the National Aeronautics Association; Frank Meisch, superintendent and plant engineer for Northwest Airlines at St. Paul; and Paul Morris, regional manager of the Civil Aeronautics Administration at Seattle.

New AAF Personnel Command

The Army Air Forces has established a Personnel Distribution Command, consolidating within one organization various related activities in connection with the processing of AAF personnel going overseas and returning from combat. Col. Henry M. Bailey is commanding officer of the new command with temporary headquarters in Atlantic City.

WPB Rating Order Change Excludes All Private Planes

Materials and repair parts for non-military planes are obtained through War Production Board's Preference Rating Order P-47, which was amended June 8 to exclude virtually all operators except airlines. This action returns the jurisdiction of the order to its position last July before it was amended to include such planes as those used by the CAA War Training Service, Civil Air Patrol and essential business.

The definition of an operator for the purposes of the order has been revised to include only commercial airlines under certificate of CAA, operators of any commercial or non-commercial planes based in Alaska and foreign commercial airlines which were included in P-47 in the second quarter of 1944 (others may file WPB Form-1747 and be authorized to receive preference ratings. Operators of any other non-military planes will get priorities assistance through CMP Regulation 5 or, if the operator is a Federal, State and local government, through CMP 5-A.

All operators under P-47 will be assigned a preference rating of AA-1 and the use of an allotment symbol and serial number. In addition, any operator who filed in the second quarter of 1944 and received an authorization, under this amendment, is automatically given the same amount for all subsequent quarters without filing. If he needs additional materials beyond this base allotment, he must file Form WPB-1747. Another change gives all operators the right to acquire construction materials up to $500 without applying for authorization.

Airlines, in particular, are relieved of a vast quantity of paper work by the final revision in P-47, WPB spokesmen stated. This is a provision whereby they may file Form 1747 for any and all items on List B of Priority Regulation 3, instead of applying to WPB Field Offices on Form PD-1A. Although no base figure is given for the List B items, operators can get their entire quarter's needs by a single application rather than through the individual divisions controlling each separate item.

Air Corps Reserve Ranks Again Open to 17-Yr.-Olds

Ranks of the Air Corps Enlisted Reserve have again been opened for volunteers in the 17-year-old age group "to insure a sufficient reservoir of qualified individuals for training next fall", the Army announces. Volunteers for training as air combat crew members will be given physical and mental tests, but will not be inducted until after their 18th birthday.

The ACERs who are less than 17 years, 9 months of age and have graduated from high school are eligible to take from three to nine months college training under the Army Specialized Training Reserve Program. The Army advised youths under 17 years to prepare for ACER enlistment by taking Civil Air Patrol Cadet training.

Reilly's D. C. Appointment Given Committee's OK

As this issue went to press, the Senate had not yet acted upon the nomination by President Roosevelt of J. Francis Reilly, executive assistant to L. Welch Pogue, chairman of the Civil Aeronautics Board, to the Public Utilities Commission of the District of Columbia. However, the Senate District Committee has given unanimous endorsement to the appointment.

Reilly

It appeared that there was little doubt but that the Senate would confirm the nomination of the witty and affable Irishman who came to CAB in March of 1940 as an examiner and who won promotion to the position of assistant to the chairman in 2½ years.

Reilly came to CAB from the position of assistant corporation counsel for the District of Columbia. He is a native of Pittsburgh, was educated at Mount St Mary's College at Emmitsburg, Md., and took his law degree at Columbus University, Washington, D. C. He was admitted to the District of Columbia bar in 1935.

Men From Many Walks Of Life Are Included in Rhode Island Air Guard

Men of widely divergent pursuits—merchants, teachers, salesmen, truck drivers, beauticians, a chiropractor—make up the two air squadrons of the Rhode Island State Guard.

Commanding officer of the units is Maj. George A. Anderson, who owns and operates a radio and electric shop. Capt. John H. Greene, executive officer, runs an automobile sales agency, and Capt. Ezra H. Kent, operations officer, teaches airplane mechanics in a high school.

Lt. Salvatore L. Bisignano, who teaches meteorology to members of the squadrons, operates a beauty shop, and Capt. George H. Bixby, adjutant, runs an advertising agency.

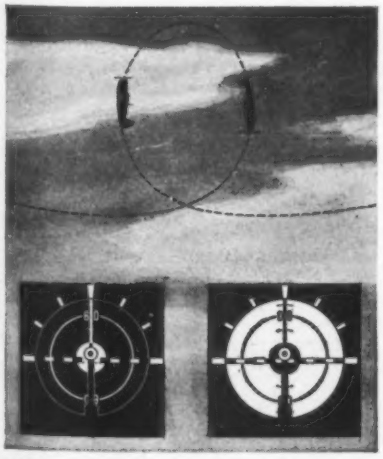
Average age of flyers is 36, ranging from 18 to 55. They use their own planes, and personally pay all expenses.

The Rhode Island Guard claims to be one of the few militia organizations whose regiment has the full benefit of its air arm on all maneuvers and command post exercises. The Wing, as the arm is called, offers free courses in aerial photography, aero-dynamics, pre-flight training, radio, aviation mechanics, navigation, and meteorology.

The small planes of the Wing are equipped with two-way radio, a factor which aids in coordinating the flyers with the First Regiment of the militia, an infantry organization.

Pattern indication gives the pilot a visual "picture" of his attitude at all times, regardless of the degree of bank, climb, or dive.

No angular limitations! The Sperry Attitude Gyro indicates pitch and bank without any angular limitations!



No caging! Because there are no angular limitations, the instrument *never* has to be caged . . . not even in acrobatics!

Attitude Unlimited!

New Sperry Attitude Gyro provides pattern indication . . . has no angular limits . . . needs no caging!

WITH THE NEW Sperry Attitude Gyro Indicator a pilot can, *for the first time,* loop, roll, dive, climb, or fly at any angle with visibility zero, and still always know the attitude of his plane relative to the earth.

The spherical dial is marked to provide the same "pattern" type of indication whether by daylight or by any artificial light . . . a single glance tells the story.

The suspension for the spherical dial of this new Sperry instrument allows full 360° freedom of indication in the roll and pitch axes of the airplane.

A small gyro spinning at 23,500 r.p.m. stabilizes the sphere and keeps it erect in relation to the earth's surface. *The airplane actually maneuvers around the indicating sphere.*

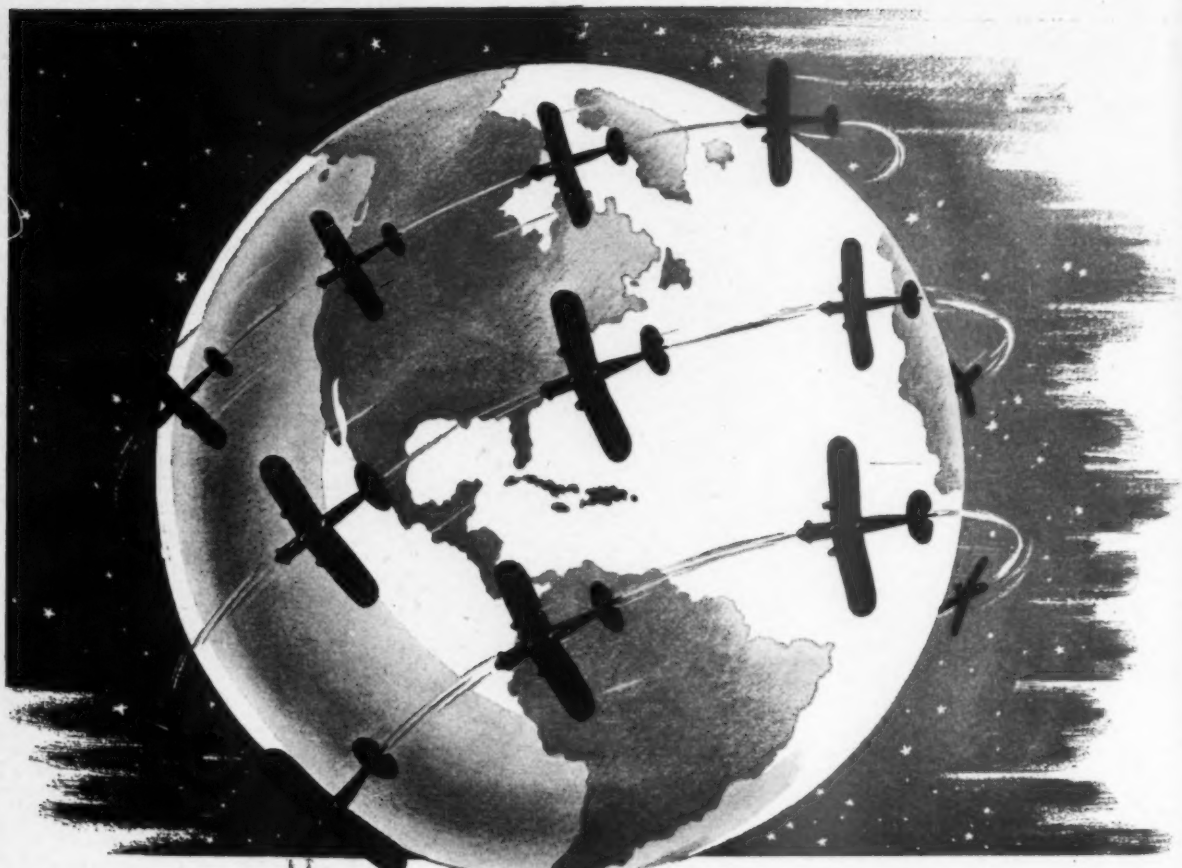
The Sperry Attitude Gyro makes instrument flying safer, easier, and facilitates maneuvers and acrobatic training.

With it there is no possibility of the gyro's tumbling, even in extremely turbulent air. And, of course, its advantages in combat are obvious.

Sperry Gyroscope Company INC.

GREAT NECK, NEW YORK • DIVISION OF THE SPERRY CORPORATION

Gyroscopics • Electronics • Automatic Computation • Servo-Mechanisms



REHEARSING FOR THE AIR-LANES OF TOMORROW

In Europe, in Asia, in the South Pacific . . . on battle fronts around the globe . . . American pilots are fighting to Victory. Thousands of these air heroes won their wings in Ryan PT-22's . . . at Ryan flying schools.

To get these superb military pilots started right, Ryan has been privileged to conduct a most extensive flight-training operation for the United States Army for nearly five years.

Daily, Ryan Schools at Hemet, California, and Tucson, Arizona, fly a distance equal to *five trips around the world.* Hundreds of seasoned pilots, men and women skilled in maintenance, and technical experts make the Ryan Schools a smooth-functioning organization experienced in the operational problems which must daily be met to keep such a large-scale project operating at peak efficiency.

Ryan Schools, with more than 20 years of active flying experience, are also, in effect, operating laboratories for the aircraft designers of the Ryan Aeronautical Company; they are instrumental in bringing new and improved methods to flying operations and better ideas on streamlined maintenance.

FIRST IN THE U. S.—Ryan, in 1925, established the first year 'round passenger air-line in the United States. The next year this pioneer organization began manufacture of planes for the air-mail service and pioneered in establishing the important Pacific Coast airway from San Diego to Seattle.

RELY ON RYAN TO BUILD WELL

RYAN

RYAN SCHOOL OF AERONAUTICS, SAN DIEGO, CALIFORNIA
OPERATING BASES: HEMET, CALIFORNIA, AND TUCSON, ARIZONA
THE RYAN SCHOOLS ARE SUBSIDIARIES OF THE RYAN AERONAUTICAL COMPANY

Airport Built in Six Stages as Need Grows

Expansion Possible Without Tearing Out Any Previous Work

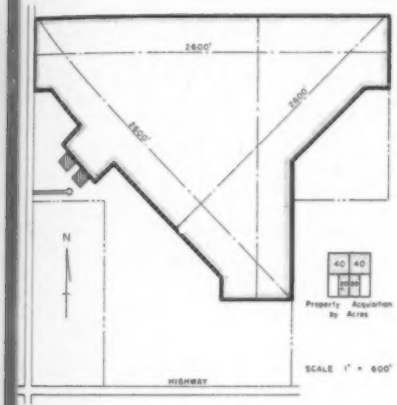
A DEFINITE planning program for the construction of airports in successive expansion stages as needs develop has been described by the Michigan Board of Aeronautics in a booklet, "Michigan Airports."

Once a proper site is acquired it is then possible to prepare a master layout plan so that development may be undertaken in such a way that expansion of the airport will be possible without tearing out or re-doing any of the original work.

The initial step for the development of an airport need not necessarily be expensive. A good turf landing field of 1,800 to 2,000 feet of landing area in all directions with clear approaches will suffice for the average small community.

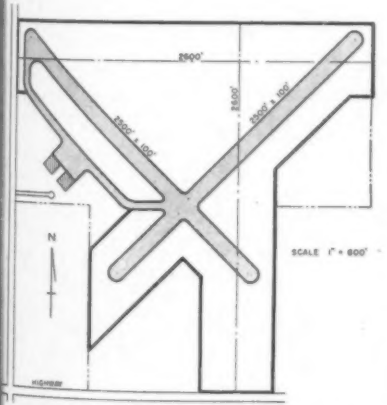
The following six sketches illustrate a planning program that is being carried on in a city of 5,000 persons in western Michigan. The drawings show successive stages of construction, to be undertaken as the need for increased facilities becomes apparent.

1.



The work included in Stage One on the site of 120 acres consists of grading, drainage and seeding of landing strips to the lengths shown. Also shown are hangars to be built as needed. The entrance driveway will be built, but even this feature is planned as part of a future double drive.

2.

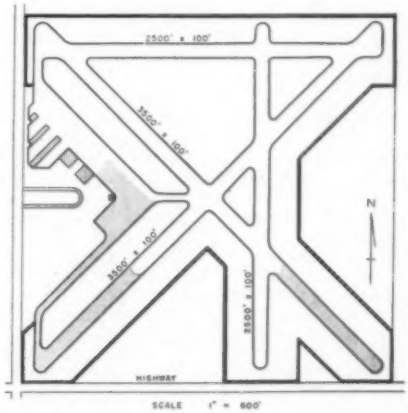


In Stage Two landing strips have been extended to the maximum lengths within the property and two runways are paved to Class 2 lengths. A taxiway and apron are included.

3.

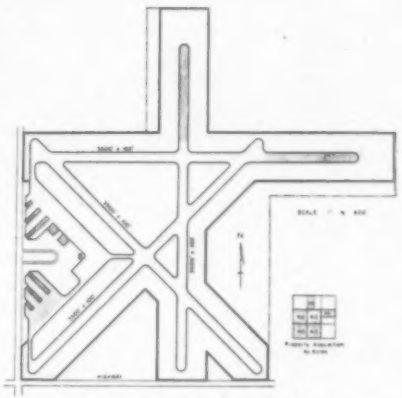
Two additional 2,500 foot runways have been added in Stage Three, completing the Class 2 development. Unit or "T" hangars are shown. These are individual hangars, built at low cost.

4.



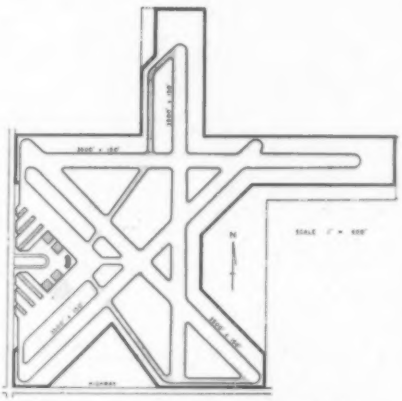
The work included in Stage Four consists of extending the two diagonal runways to Class 3 standards to accommodate limited airline operation. An additional 40 acres of ground are required. Also included is the first unit of the administration building, paving the loading apron and completing the roadway for the entrance drive.

5.



With the site enlarged to 200 acres it is possible to extend the N-S and E-W runways to 3,500 feet so that all the runways will be of Class 3 length. Also included in Stage Five are additional hangars with paved aprons.

6.



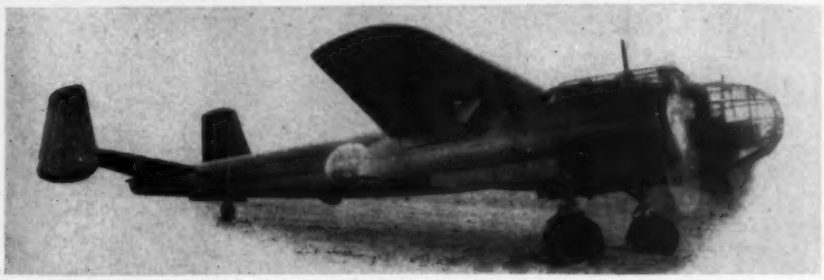
Stage Six represents the maximum development of this airport. It consists of widening the runways to 150 feet, paving taxiways to provide ready access to the ends of the runways, two additional hangars and the final units of the administration building.

Stephens Heads Washington National Airport Club

A National Airport Club, formed to "provoke and disseminate information and the exchange of ideas covering the subject of aviation and air transportation at Washington National Airport," held its first meeting last fortnight with 45 charter members present. All airlines operating into Washington, the airport management, the CAA and other groups were represented.

V. K. Stephens, station manager for Pennsylvania-Central Airlines in Washington, was elected president; W. R. Van Vechten, sales representative of the aviation department of Gulf Oil Co., vice president; W. E. Nichols, manager of Airport Transport Inc., secretary, and Karl P. Hughes, district traffic manager of United Air Lines, treasurer.

Sweden Designs New Fighter and Bomber



Two 1,500 hp inline engines power a new bomber for the Swedish Air Force, top photo. It is known as the B-18. The new Swedish fighter, lower photo, has wings and fuselage made of wood squares. It is called the J-22.

Swedish Air Force Being Strengthened

FORCED TO RELY on its own materials and engineers since the start of the war, Sweden is stepping rapidly ahead in building up its Royal Air Force.

A new medium twin-engine bomber and a single-seat fighter, the latter of unusual construction, have just been added to the country's military equipment. Both planes were designed by Swedish engineers and are completely manufactured in Sweden.

The fuselage and wings of the new fighter are made of wooden squares mounted on a forged steel framework. The wood squares have been heat-treated to increase tensile strength. If the plane is struck by gunfire only the punctured squares need to be replaced.

The Swedish engineers resorted to this type of construction because of the native abundance of wood and because of the need to make the plane as light as possible for the comparatively low-power engine available.

The metal bomber in its latest version has 1,550 hp inline engines. The ship is built by Svenska Aeroplane Aktiebolaget (SAAB), large aircraft manufacturing company in Sweden. The installation of dive brakes enables the plane to be used also a dive bomber.

Fighter Designed by Air Force

The fighter was designed by the Air Force. Parts are made by subcontractors and the plane assembled by Air Force engineers.

The Swedish Air Force before the war used much American, British, Italian and German equipment. North American two-seat trainers still are used in fighter training. The bulk of the planes in use now, however, are Swedish made, some under American license.

The Swedish Air Force has been a separate military unit from the Army and Navy since 1925. Its appropriation now is far larger than that for the Navy and almost as large as the Army fund.

In the strategy of modern war and due to the geographical location of Sweden, its air force personnel is given training both as an adjunct to the Navy and to the Army.

The Air Force consists of six bombardment flotillas of three squadrons each, seven fighter flotillas of three squadrons

each, one torpedo flotilla, one tactical reconnaissance flotilla, one strategic reconnaissance flotilla, an undisclosed number of Navy reconnaissance flotillas, and three flying schools.

Flight Strips Authorized In New House Highway Bill

Authorization for construction of flight strips throughout the country is contained in the Postwar Highway Construction bill (H. R. 4915) reported out recently by the House Roads Committee, but no funds are earmarked for this purpose. The bill authorizes a total of $500,000,000 a year for the first three "successive postwar fiscal years" for highway and flight strip purposes.

Language of Section 11 dealing with flight strips is: "The Commissioner of Public Roads is authorized, notwithstanding the provisions of any other law, to cooperate with the State highway departments and any Federal agency in the location, development, construction, and maintenance of flight strips adjacent to public highways, or roadside development areas along such highways, in order to insure greater safety for traffic on the public highways by providing additional facilities to be available for the landing and take-off of aircraft. When requested by the State highway department, funds authorized by this Act are hereby made available, in addition to any funds that may be available under any other appropriation, for carrying out the provisions of this section and for paying all or any part of the necessary costs incurred therefor, including the cost of acquiring the land necessary for such facilities.

"Federal highway funds shall not be used for the reconstruction or relocation of any highway giving access to a flight strip or airport, or for the reconstruction or relocation of any highway which has been or may be closed or the usefulness of which has been or may be impaired by the location or construction of any flight strip or airport, unless the officials in charge have first concurred with the State highway department and the Public Roads Administration in the location of such flight strip or airport."

Swedish Line Marks 20th Anniversary

A. B. Aerotransport, the Swedish airline and one of the oldest air transport operators in Europe, celebrated its 20th anniversary on June 2.

ABA was formed in 1924 by Capt. Carl Florman, who during the 20 years has been its president and managing director. On June 2, 1924, the first flight started between Stockholm and Helsingfors with a single-engine, four-passenger seaplane. Since then, route miles have increased from 450 to 4,500.

In 1925, the company inaugurated the first service in Europe with three-engined all-metal nine-passenger planes. The service operated between Malmo, Copenhagen and Amsterdam, connecting in Amsterdam with Air France for Paris and Imperial Airways for London.

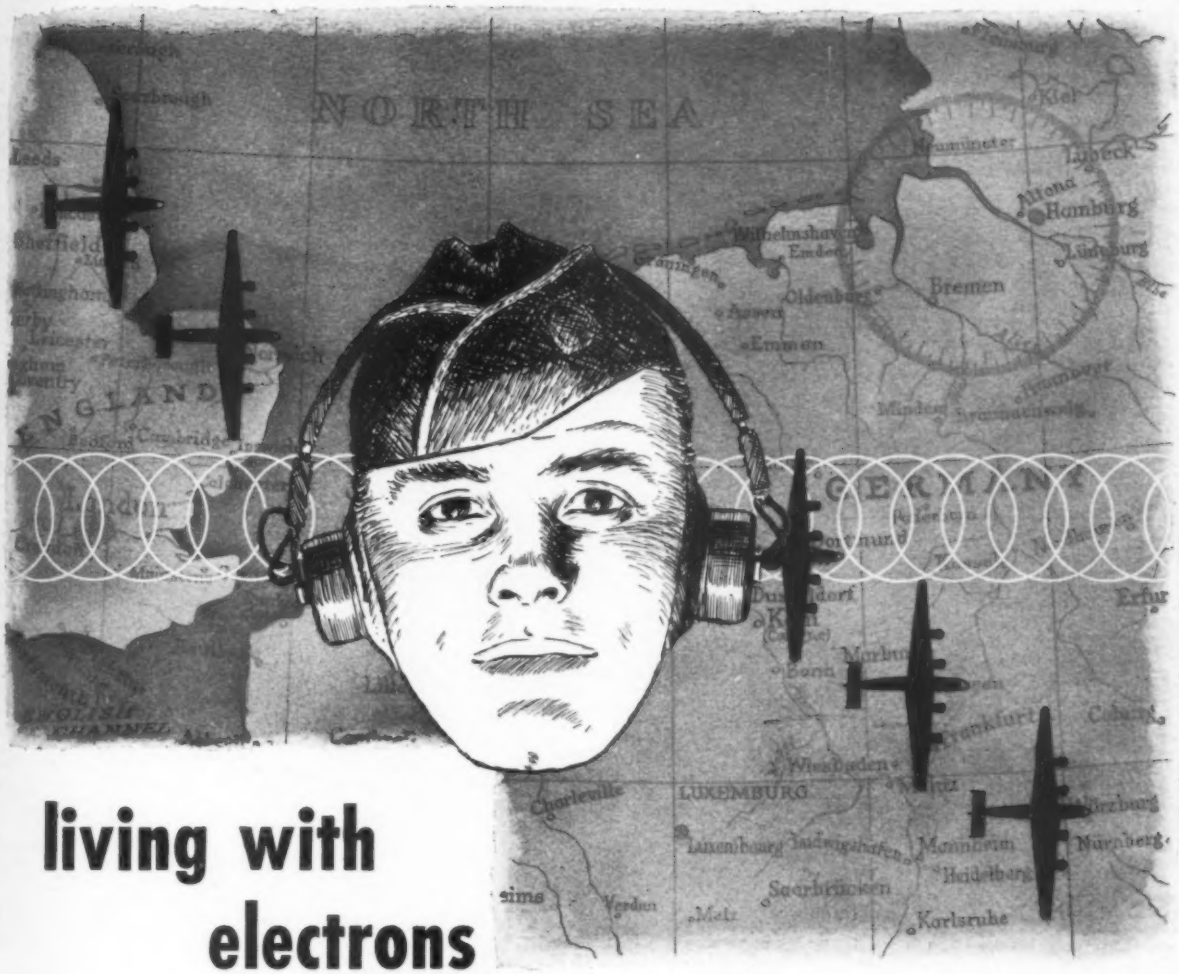
In 1928, ABA started the first night air mail service between Stockholm and London, carrying all first-class mail without surcharge. The route was operated with single-engined planes which carried, in addition to the crew, a clerk from the Swedish post office, who sorted and stamped mail during the flight. This service was so successful that it eventually developed into a network, enabling mail to be sent between major European cities overnight.

In 1937, ABA added Douglas DC-3s to its fleet, and still uses this type aircraft. Until the war the company had lost only one passenger. In 1943, however, two of ABA's planes were lost due to "war action" on the Sweden-Scotland route, and K. C. Lindner, the company's chief pilot since its start, was killed. ABA's service during the war has necessarily been irregular. The Stockholm-Scotland route is now temporarily suspended.

Dinner in Washington

On June 2 the airline gave a small dinner to mark its 20th anniversary at the Statler Hotel, Washington. Hosts were K. H. Larsson, vice president who has been in the U. S. for the past year, and T. H. Nilert, U. S. representative. Guests were:

A. de Aminoff, Counselor of the Swedish Legation; J. D. Walstrom, aviation division, State Department; Irving Taylor, Douglas Aircraft Company; T. H. Winstrand, Counselor of the Swedish Legation; Stokely Morgan, chief, aviation division, State Department; Wayne W. Parrish, editor of *American Aviation;* Arthur Christie, United Aircraft Corp.; Frank Fleming, Douglas Aircraft Company; Lt. Col. Sam Gates, Air Transport Command, AAF; L. Welch Pogue, Chairman, Civil Aeronautics Board; Charles I. Stanton, Civil Aeronautics Administrator; and John Rogers, V.P. of Douglas Aircraft Company.



living with electrons

Only a short time ago—when the principles of radio were discovered—men began dimly to realize the versatility of electrons. But it was not until war came, with its deadly challenges, that men really began living with electrons, utilizing them in amazing applications in ships and planes and battle vehicles. Their versatile performances promise future applications that will make electronic devices a part of our daily lives.

Delco Radio has been working in close cooperation with Army and Navy engineers to help make electronics an increasingly effective "weapon" of war. The assignment has called for full utilization of Delco Radio's research laboratories, engineering background and production facilities, by means of which principles have been explored and exploited, designs evolved to apply these principles, and complete equipment manufactured with speed and skill. To all radio and electronic applications, Delco Radio brings its long experience in volume production of precision radio instruments.

DO MORE THAN BEFORE—
BUY MORE WAR BONDS

Delco Radio
DIVISION OF
GENERAL MOTORS

WPB Sets Up Staff On Production and Reconversion Plans

Readjustment and reconversion of production programs will be charted by a new committee, the Production Executive Committee Staff, in the War Production Board. Under Executive Vice Chairman C. E. Wilson, the PEC Staff will coordinate all information on proposed cutbacks and future requirements as well as develop flexible plans to meet the production changes created by full or partial termination of the war.

The Staff "will get all of the necessary information on proposed production changes," WPB Chairman Nelson stated in announcing formation of the Committee. "It will match this with all of the necessary information, first on proposed new programs for military production and second on proposed programs for additional civilian production. It will know what the possibilities are and what the needs are; it will know how such things as local manpower situations or shortages of essential parts or materials may affect the uses which can be made of plants or workers which are going to be made idle. The staff will then be able to make recommendations concerning the timing, manner and locale of production changes to the Production Executive Committee and recommendations concerning the placement of new programs to the Requirements Committee."

Deputy Directors Listed

Deputy directors of the entire staff will be Stacy May and William B. Murphy, assisted by the combined staffs of the Bureau of Planning and Statistics and the Requirements Committee. Agencies represented on the new committee include: Army Service Forces, Army Air Forces, Navy's Office of Procurement and Material, Bureau of Aeronautics, Maritime Commission, and War Manpower Commission. Representatives of the following WPB offices are also included: Program Vice Chairman, Operations Vice Chairman, Civilian Requirements Vice Chairman, Labor Production Vice Chairman, Manpower Requirements Vice Chairman, Chairman of Smaller War Plants, Metals and Minerals Vice Chairman and the Vice Chairman's Office.

Uniform Termination Article Adopted For All Purchase Orders

A uniform termination article to be inserted in all purchase orders and subcontracts for use in the settlement of claims under fixed-price sub-contracts has been adopted by the Joint Contract Termination Board and approved by Director of War Mobilization James F. Byrnes.

Procedures also will be established by which subcontract claims for small amounts may be validated immediately provided certain safeguards are observed, the Board promised.

NAA Joint Airport Users Conference in Washington Scheduled for July 24-25

Fifty organizations and government agencies have been invited to attend a Joint Airport Users' Conference in Washington July 24 and 25 sponsored by the National Aeronautic Association. NAA has planned the conference "to bring all interested groups into concert in planning for postwar landing facilities throughout the United States."

Among those invited to send delegates to the conference are national organizations of the various components of the aviation and construction industries, groups representing the public interest in airport problems, Federal agencies, and state, county, and local governments.

"This country's stake in the air depends to a very large extent upon an adequate understructure of landing facilities," said William R. Enyart, president of NAA. "Our present airport pattern must be improved and vastly expanded if it is to meet postwar requirements. There has been no lack of proposals for airport development, but maximum expansion of landing facilities depends upon coordination of effort and general agreement upon such questions as the type, size, and number of airfields needed, and airport classification, and nomenclature."

Study of Multiple Taxation Of Air Commerce Proposed

Spurred by the recent Supreme Court decision in the Northwest Airlines tax case which permits states to levy a 100% property tax on the entire fleet of an airline operating in the state, Rep. Alfred Bulwinkle (D., N. C.) chairman of the aviation subcommittee of the House Interstate and Foreign Commerce Committee, has introduced a bill providing for a study of multiple taxation of air commerce.

For this purpose, Bulwinkle lifted Section 11 bodily from the Lea Aviation Bill and incorporated it in his new bill (H. R. 4935). He said he hoped to obtain action on the tax-study bill, although the Lea Bill itself may remain tied up in the House Rules Committee.

HR 4935 provides: "That the Civil Aeronautics Board shall consult with the appropriate authorities of the several States, Territories and possessions, and sub-divisions thereof, with a view to the development of means for eliminating and avoiding, as far as practicable, multiple taxation of persons engaged in air commerce and their employes, by State, Territories and possessions, and subdivisions thereof, and other taxation by States, Territories and possessions, and subdivisions thereof, which has the effect of unduly burdening or unduly impeding the development of air commerce. The Board shall report to Congress, within one hundred and eighty days after the day on which this Act is enacted, the results of its consultations with such authorities together with such recommendations as it deems advisable, including recommendations for legislation by the Congress if such legislation appears necessary or appropriate."

Compulsory Aviation Training After War Advocated by ATS

Postwar compulsory military aviation training and a strong Federal air policy were advocated by operators of primary training schools at the semi-annual conference of the Aeronautical Training Society at New Orleans.

"For the sake of the nation's good as well as the future of aviation, we must ask a strong governmental air policy," said Earl Prudden, vice-president of Ryan Aeronautical Company and Ryan Aeronautical School.

After asking for "further clarification of air regulation and airport policy," Prudden demanded that ATS schools be used as a nucleus for any government program of expanded aviation training. Harry White of King City, Calif., urged postwar adoption of a national service act providing for aviation training for selected youths under Army supervision.

Calls U. S. Airports Ugly

Declaring that nearly all of the nation's airports are ugly and poorly located, Oliver Parks, of Parks Air College, stated that the entire future of aviation in this country is dependent upon obtaining an adequate airport system. The government should provide for the initial program, he said, furnishing land, lighting, and drainage, but the growth of air travel would pay for later improvements as automobiles have paid for the highways.

J. Wendell Coombs was reelected president of ATS and William F. Long, secretary. The following directors were named: Wesley N. Raymond, Douglas, Ga.; Beverly Howard, Orangeburg, S. C.; Albert I. Lodwick, Lakeland, Fla.; William F. Long, Dallas; Bennett Woolley, Corsicana, Texas; William R. Kent, Memphis; C. C. Moseley, Glendale, Calif.; Leland Hayward, Beverly Hills, Calif.; and Harry S. White, King City, Calif.

$200,000 Allocated To Aid In Reopening Philadelphia Field

The Federal government has announced, through officials of the Civil Aeronautics Board, its decision to make available some $200,000 for the installation of temporary facilities at the Northeast Airport of Philadelphia so that air transport service to Philadelphia may be restored.

Air transport service to Philadelphia was suspended last December with the closing of the Philadelphia Municipal Airport. The closing was ordered by CAB after military authorities emphasized the hazards which existed because of war activities.

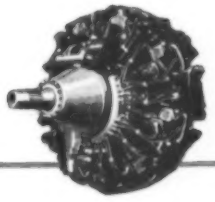
A few months ago Philadelphia authorities and members of Congress from the area conferred with CAB officials and urged that some steps be taken to enable the restoration of service. As a result, CAB recommended to President Roosevelt that $200,000 in emergency funds be provided for installation and construction of temporary facilities. The President approved the request.

He covers the continent – *between editions*

In 6 hours and 58 minutes, less than the time between morning and afternoon editions, the TWA Lockheed *Constellation* spanned the continent. Commercial air transport, by this flight, reached scheduled speeds formerly possible only in military planes.

This TWA flight proved that such air travel will become routine, enabling passengers to cross from New York to Los Angeles between midnight and breakfast, with a full business day at each end. Planes like the *Constellation* assure true overnight service to foreign ports.

Four Wright Cyclone 18's of 2,200 horsepower each power the *Constellation*. Most powerful engines in service, Cyclone 18's were the choice of engineers and operators alike for reliability, fuel economy and the payload bonus on every flight which their lower unit weight provides. Such basic factors, plus the Cyclone's low maintenance cost, continue to demonstrate the axiom that *Wright Cyclones pay their way.*



Cyclones Save 3 Ways

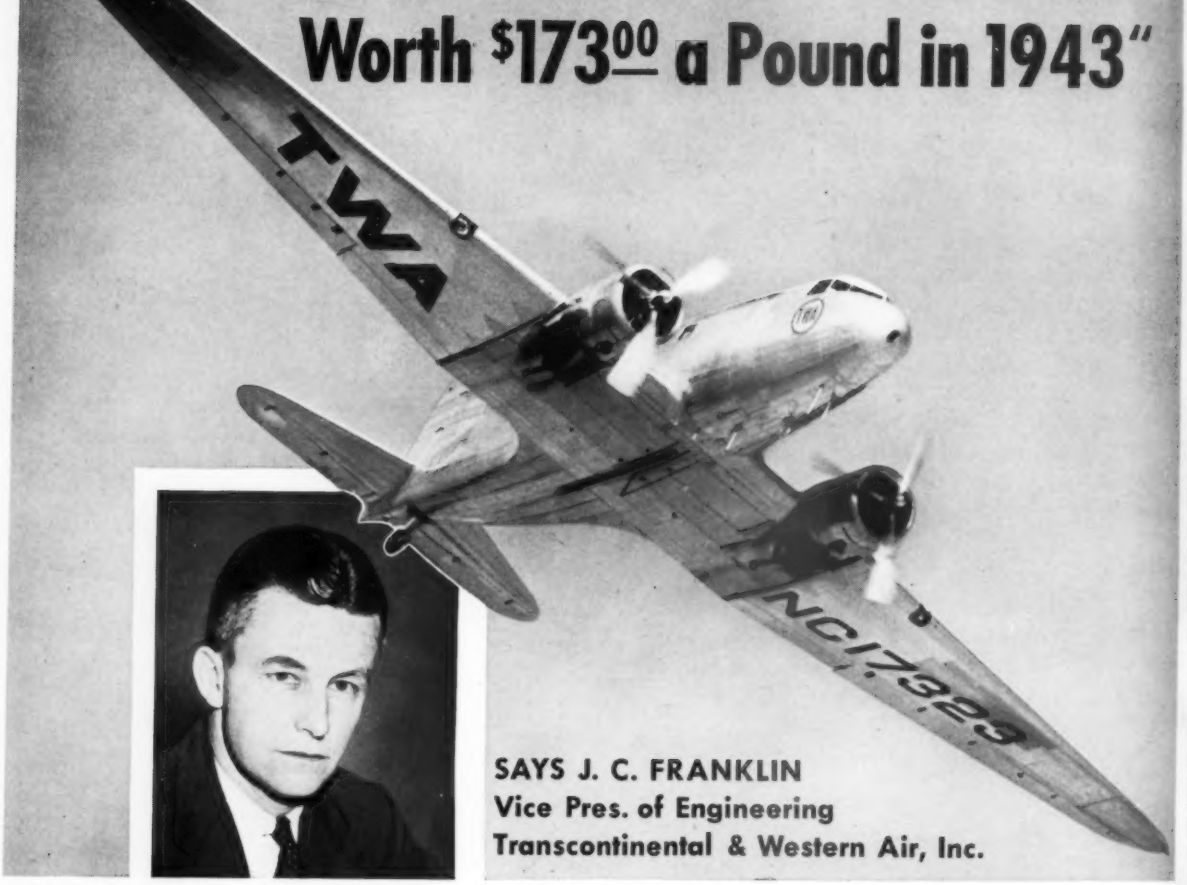
LESS WEIGHT—MORE PAYLOAD
LOWER FUEL CONSUMPTION
REDUCED MAINTENANCE

WRIGHT

Aircraft Engines

WRIGHT POWERS THE TONNAGE OF THE AIR

"Weight Saved On a TWA Plane Worth $173.00 a Pound in 1943"



SAYS J. C. FRANKLIN
Vice Pres. of Engineering
Transcontinental & Western Air, Inc.

"SINCE September 9, 1943, the standard operating weight of TWA DC-3 aircraft, consisting of airplane, crew, oil, full equipment and meals, has been decreased 261 pounds per aircraft for summer operation and 279 pounds per aircraft for winter operation.

"Interpreted in terms of payload space, which TWA valued at $173 per pound in 1943, we have found that this weight reduction program has given us the equivalent of an additional DC-3 for our entire fleet of Skyclubs."

SEND FOR FREE BOOTS WEIGHT-SAVING BOOKLET TODAY

Comparative weights of various types of self-locking nuts comprehensively reviewed for the convenience of aircraft designers, engineers, operating and maintenance personnel. Copy will be sent you, free, on request.

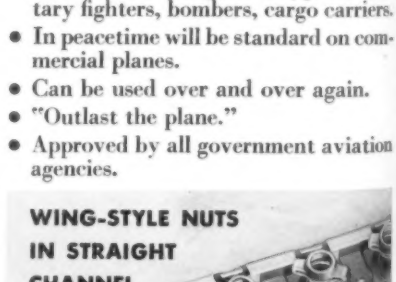
BOOTS *SELF-LOCKING NUTS*

"They Fly With Their Boots On—Lighter"

Boots Aircraft Nut Corporation, General Offices, New Canaan, Conn., Dept. G

BOOTS NUTS SAVE UP TO 60 LBS. PER PLANE

- Much lighter yet far tougher than other nuts.
- Standard fastenings on *all* types of military fighters, bombers, cargo carriers.
- In peacetime will be standard on commercial planes.
- Can be used over and over again.
- "Outlast the plane."
- Approved by all government aviation agencies.



This is one type of the famous Boots All-Metal Self-Locking Nut—set in straight or curved channel for fast assembly.

Outlook for Further Work on 28 Airports Appears Brightened

A Congressional delegation, aiming to prevent abandonment of work on 28 partly-completed airport projects in 17 States, expressed encouragement after an interview with the President last fortnight.

Congress last year appropriated funds for the completion of these projects and the Army Airport Approval Board endorsed their completion in February. Subsequently, it is understood, however, the President directed a re-survey by the Board. It has been indicated that the re-survey will recommend abandonment of further construction on the ports as "not essential to the war program."

After seeing the President last fortnight, Rep. Jennings Randolph (D., W. Va.), who headed the Congressional delegation, declared: "We have placed before the President information which he indicated he had not previously possessed. We are much encouraged by the attitude of the President and he promised he would immediately recheck . . ." Other members of the delegation were: Sen. Guy Gillette (D., Ia.); Sen. Harold Burton (R., Ohio); Rep. William Stevenson (R., Wis.); and Rep. Harve Tibbott (R., Pa.).

Price of One Navy Plane Declines 62% in Two-Year Period

Individual types of Navy planes have declined in price as much as 62% between 1942 and 1944, according to a report made by the Price Analysis Division of the Navy's Office of Procurement and Materiel for Secretary Forrestal.

One type of Navy fighter plane made the most spectacular record in cost reduction, declining 62% in price between May, 1942 and February, 1944. A scout bomber declined 32% in price from March, 1942 to December, 1943; a torpedo bomber showed a price decline of 23.7% from January, 1942 to December, 1943, while a patrol bomber increased 7.2% in price from January, 1942 to July, 1943 and a non-rigid airship reflected a price rise of 9.3% from July, 1942 to December, 1943.

Statistics on procurement for the Bureau of Aeronautics reveal that four series of aircraft engines show cost reductions of 23.1, 9.0, 7.9 and 9.9% from January, 1942 to December, 1943. Propeller blade assemblies are represented by two series which declined 12.5 and 7.9%.

The Price Analysis Division pointed out that in the Bureau of Aeronautics many of the important items are new and therefore earliest prices may include initial engineering costs, tooling costs, training costs for personnel, etc., with the result that later contracts will usually be at lower prices, reflecting the absence of these non-recurrent expenses as well as the benefits of experience.

Feeder Airlines Assn. Mapping Year's Plans

The Feeder Airlines Assn., organized on a temporary basis last spring, will be set up permanently at a two-day meeting in Washington today (June 15) and tomorrow, according to Harry R. Stringer, vice president of All American Aviation, who has been chairman of the organization committee.

A program to activate the policies and purposes of the association, a budget for the coming year, and changes in Articles of Association will be decided upon, and permanent officers elected.

Representatives of the following 25 charter member companies are expected to attend the meeting:

All American Aviation
Automatic Air Mail
Aviation Enterprises
Central States Aviation Corp.
Clear Ridge Aviation
Coast Aviation Corp.
Consolidated Airlines
Dixie Air Transport Co.
Hawthorne Airways
Hylan Flying Service
Kansas Aviation Co.
Land Water Air Service
Mercury Development Corp.
Mountain States Aviation
Otto Aviation Corp.
Parks Air College
Racine Flying Service
Ryan School of Aeronautics
Southair
Southeastern Air Express
Southern Aviation Corp.
Southwest Airways Co.
State Airlines
Virginia Central Airlines
West Coast Airlines

These companies are now operating, or have applications pending before the Civil Aeronautics Board for air pick-up or feeder lines in every part of the country, representing an accumulative total of 140,561 route miles.

Action of Illinois Court Cheers State Airport Developers

State airport planners are greatly heartened over the recent action of the Illinois Supreme Court in agreeing to hear a re-argument of its decision wherein the Court invalidated the Illinois Airport Authorities Act of 1943.

Since the Board held several weeks ago that operation of an airport was a private rather than public enterprise and therefore it was illegal for the Springfield Airport Authority of Springfield, Ill., to levy and collect taxes for the development and maintenance of such a service, the airport development program of Illinois had come to a virtual standstill.

Springfield, through local counsel and Charles S. Rhyne, of the National Institute of Municipal Law Officers, of Washington, field a petition for re-argument on the grounds that the court had not been apprised of all of the facts and decisions relating to the issue. In granting re-argument, the court asked for new briefs on all questions raised during the previous hearing as well as specific information on three points raised by the court itself. In its order allowing re-argument, the court denied petitions of some 17 downstate Illinois cities which had asked permission to appear as Friend of the Court.

Meanwhile a district court in Minneapolis upheld the legality of the Minneapolis-St. Paul Airport authority and this case is now headed for the State supreme court as the action was originally started with the idea of having the state's highest tribunal pass on the question of constitutionality.

Praise the Lord and Pass the Resolution

(R. W. F. "Bob" Schmidt, superintendent of airports service, Civil Aeronautics Administration, Santa Monica, Calif., has submitted the following article to AMERICAN AVIATION, *expressing his views on the so-called "experts" in aviation—Ed. Note.)*

Perhaps you have not read Thomas de Iriarte's fable of the ass, that, when grazing, chanced upon a flute forgotten in the grasses of the meadow. Naturally, this ass, exhibiting almost human traits, could not withstand the impelling forces of curiosity, and he touched this flute with his nose while sniffing at it. Came forth, then, a beautiful note, and the animal, delighted at his achievement, brayed: "Who says that I am unable to make music?"

This person is bewildered by the rising tide of individuals hailed as experts and authorities in aviation matters. In fairness to most of these individuals, they are not always aware of their status nor do they perceive that the gems which fall from their lips are seized as genuine by an eager populace.

When a streamliner conductor voices his beliefs in management problems of railroads, when a rancher complains of marketing situations, or when the local manager of a chain system department store tells us what is wrong with the dry goods business, we respect their opinions.

We respect their opinions because, while they are lesser luminaries, they have attained their positions over a period of years by virtue of some hard work and a certain amount of ability.

Similarly, if a man has spent a little time in aviation in a relatively responsible spot, we rather believe that he may pop off publicly in a manner commensurate with his training, experiences, and range of contacts. However, notwithstanding our admiration for these men, we do not expect them to enunciate long range policies for their fields of endeavor with any anticipation of being heard or believed unless they have clearly demonstrated that they have gone beyond the limits of duty in their thinking and deeds.

Before delving further into this line of thought, however, it will be well to define "expert" and "authority" because these terms are carelessly flung hither and yon these days.

Expert: "One who has special skill of knowledge in a subject, a specialist."

Authority: "Power due to opinion or esteem; influence of character, station, mental or moral superiority, or the like."

With these standards before me, I cannot conceive why the layman will even bother to sit through a luncheon of invariably mediocre food—let alone pay for one—to hear the great message on the future of all aviation from Richard Roe,

former manufacturer of shoe-lace tips and now a sub-contractor to a sub-contractor furnishing liddle lamzy divey to Mastadon Aircraft Corporation. We concede that Richard may have done one hell of a swell job in converting his factory and in stepping up production, and we'll also say a word for these many Richards all over the nation: Indispensable. But, are there not limits to perspective?

The fellow with his thumb stuck in the hole in the dike is not demonstrating any "special skill or knowledge" or exhibiting much "influence of character, station, or mental or moral superiority," *except* on the subject of thumbs stuck in holes in dikes and the reasons for same.

Nonetheless, some bystander, mistaking courage and resourcefulness as symbols of comprehension and complete understanding, asks this thumb-sticker about the conversion or hydrostatic pressures in pounds per square inch to heads of water in feet. The guy with the thumb, his sphere of activity being necessarily restricted because of the position of his digit, and therefore being unable to seek counsel, feels obliged to quench the thirst for knowledge as exhibited by this sudden admirer; flattered, he squirms a little, shifts his intellectual cud, and lets fly. An expert, an authority, is born!

May Have to Recount

Later, when his thumb-sticking is history, he will be called upon to recount his exploits, and unless he remembers the maxim that an expert is only a damned fool away from home, he will be on his way. However, one day he may discover that all damned fools do not necessarily go away from home. Some stay there, marry the boss' daughter, and qualify as authorities. Now, nothing is so disconcerting to the nomadic practitioner as that unhappy moment when he encounters the locally entrenched savant. The wanderer, realizing that the home-grown product is a hardy variety, indeed, may retire from the field permanently, or he may concede a point. Either act further strengthens the position of the localite, but if the out-of-towner is so bold as to clip the homing pigeon's wings, *he's* still around to expert!

Take my racket, for instance: Airports. I have been batting around them for fifteen years, and I have been exposed to quite a few schools of thought and methods of accomplishment—both in and out of government service—from coast to coast, and from the sub-tropics to points where the temperatures are low enough to affect the proverbial brass anthropoid. During this period, I have encountered quite a few experts and authorities. This time, I am not given to levity—those of whom I speak now were the McCoy. Not all of them were modest, retiring souls, either. Many of them shouted their wares from the house tops (or just above). They had learned just what a lot of alleged academic moss-backs already knew—if you have a budget to balance, having all of the answers is no asset unless you have publicity.

Because aviation is, in all of its complexities, the mountain risen overnight from which rivulets of molten lava and chilling water both flow into our economic fields below, it is becoming increasingly difficult for those within the industry to discern who's who. Too many individuals, inadvertently or not, are exercising influence not quite on a par with accepted concepts.

Unfortunately, those to whom we refer as laymen are not generally students of trends outside their immediate means of livelihood and circle of friends. When they attend their Chamber of Commerce and service club luncheons, they are, in truth, making their contact with the outside world. The speaker of the day will always have a few listeners who take him seriously, and the speaker, if a personable or dynamic sort, is likely to develop considerable enthusiasm. When it so happens that he is talking through his hat, irreparable damage may be wrought. Of course, these frauds are not confined to aviation, but they are more likely to occur because the people are more receptive to that which purports to be the low-down or the inside stuff on matters aeronautical.

Too many times now, I have seen Chambers of Commerce and service clubs adopt resolutions endorsing or disapproving practically anything at the suggestion of an "expert" or "authority." Of course, pressure groups know of the desire of the layman to have some voice in affairs of the day, and of the wish to help another with his problems, so they frequently bend these well-meant gestures to coincide with their requirements, which are often to the detriment of all.

Of course, I may be unduly upset about all this, but when I find that sheep in wolves' clothing are successfully howling outside the settlements and frightening the populace into hurried and unreasoned action, so that when the real trouble comes we may find deaf ears, I am worried. I am worried because it concerns my future, and yours, too. I should like to see harmony in this industry of ours, and I believe that a little less ringing oratory ending with the theme, "Praise the Lord and pass the resolution," will do more to amalgamate the interests which currently comprise it.

We have to go forward, but as we contemplate the lush meadows, let us not be misled—more important, let not others, who would help us shape our destiny, be misled—by those who chance to sniff at mislaid flutes.

Inter-Plant Time Saved by Plane

Valuable traveling time between the two plants of Cooper-Bessemer Corp. at Mount Vernon, O., and Grove City, Pa., is saved by officials of the company through use of this five-passenger Fairchild. Cooper-Bessemer makes Diesel and gas engines, compressors, and auxiliary equipment vital to the war effort. (See page 6)

Revised Army Travel Rules Boost Airlines' Priority Business

Changes in Army travel regulations, putting officers on a per diem rather than a mileage basis, have resulted in a substantial increase in the airlines' priority business and have also, to a lesser degree, boosted non-priority travel.

Prior to March 1 of this year, Army officers traveling under official orders received eight cents a mile travel allowance. However, when their orders specifically directed them to use air transportation, they were on a per diem basis. Under this system, officers were not inclined to use air transportation—their travel costs by rail would be much less than the eight-cent allowance, even allowing for land grant deductions.

Effective March 1, however, officers were put on a per diem basis when traveling under official orders (except when permanent change of station is involved). Under this system, they receive only their actual fare plus per diem allowance, which varies generally between $6 and $9 a day. Navy personnel were not included in the change.

This system, it is said, encourages officers to "get there and get back in a hurry" because on a $7 per diem, for example, they might lose money on the trip.

For this reason, more and more military personnel are turning to air travel. If their orders specifically direct them to use air transportation, they automatically receive a Class 3 priority. If their orders do not so state, they may use air travel without a priority.

A survey of the five airlines in Washington—American Airlines, TWA, United, Eastern and Pennsylvania-Central—showed that the change has resulted in a definite increase in priority business. One airline reported that it was "flooded" with Class 3 priorities. Others stated that they were noticeably tighter on priorities than they were before March 1.

Virginia Rideout, manager of the U. S. Capital Airline Ticket Association—the joint airline ticket office in the Pentagon Building (sponsored by American, TWA, United, Eastern, PCA and Northwest) stated that business through that office increased substantially about March 15 and has been building up since.

The airlines also report that they are getting an increasingly larger amount of business from enlisted Army and Navy personnel, who are entitled to a priority 4 on either their last furlough before going overseas or on their first journey upon return from overseas stations.

Service Record . .

The first Beechcraft built for the U. S. Army Air Forces was delivered and accepted on June 13, 1939.

Since that day, thousands of Beechcrafts have been accepted by both the Army and the Navy. Since that day, Beechcrafts have flown millions of hours for our armed services. Beechcraft advanced twin-engine trainers have schooled a majority of Air Forces bombardiers, navigators, and multi-engine pilots. Beechcraft twin-engine and single engine transports have safely and swiftly carried important personages on war missions, in this country and in foreign theaters of war. Beechcrafts have successfully operated from all sorts of runways in every conceivable type of climate, in all kinds of weather.

In more than a thousand days and nights of strenuous service, the stamina and performance of Beechcrafts have been severely tested. After five years of war and preparation for war, they have made such an outstanding record that today the Army and the Navy are *continuing* to order more Beechcrafts for training and other vital purposes.

Official Photograph U. S. Army Air Forces

Beech Aircraft

CORPORATION

BEECHCRAFTS ARE DOING THEIR PART

WICHITA, KANSAS, U. S. A.

Legal Move Blocks Grace Terminal in U.S.

CAB Says It Lacks Authority to Force Panagra Extension

A LEGAL MANEUVER, which raised the point of the Civil Aeronautics Board's authority to compel the extension of an airline which technically had not applied for an extension of its route, was successful in blocking the hopes of W. R. Grace and Co. for obtaining a U. S. terminal for its subsidiary, Pan American-Grace Airways, Inc.

When the Board, on May 24, handed down an opinion that it lacked the power to compel such an extension and therefore would be compelled to dismiss the proceeding, it automatically blocked consideration of 3,400 pages of testimony which had been taken during a bitterly contested six weeks hearing in New York. The New York hearing was based almost entirely on the economic and public interest phase of the proposed extension of Panagra from Balboa, Canal Zone to a U. S. terminal at either Miami, Tampa or New Orleans.

At the opening of the New York hearing last fall, Pan American Airways, Inc., joint co-owner of Panagra, filed a motion that the proceeding be dismissed on the ground that the Board did not have jurisdiction. The Board some few days later dismissed the motion without prejudice to its renewal at the close of the hearing. The hearings then continued for another five weeks at the close of which Pan American renewed the motion.

Voluntary Agreement Sought

Then on Jan. 31 the Board listened to oral argument of counsel of Pan American, W. R. Grace & Co., Eastern Air Lines, National Airlines and Chicago and Southern touching solely on the jurisdictional issue. The three domestic airlines joined with Pan American in urging that the case be dismissed on the grounds that the Board lacked authority to compel the extension of Panagra to a terminal in the United States.

Because Pan American, owner of one half of the stock of Panagra, had refused to join W. R. Grace & Co., owner of the other half of the stock, in the filing of an application for this extension of route, W. R. Grace & Co. filed a petition and complaint requesting the Board to institute a proceeding pursuant to section 401(h) of the Act to alter, amend, and modify Panagra's certificate so as to extend its northern terminal from the Canal Zone to some point such as Miami, Tampa or New Orleans.

The Board explored the possibility of working out a voluntary settlement of the controversy between Pan American and Grace. Numerous conferences were held by the Board with both parties. Finally the Board suggested that the parties enter into an agreement under which sufficient shares of the two stockholders would be transferred to an independent director or directors who would be able to break the deadlock resulting from the equal division of the ownership of Panagra stock between Pan American and Grace.

When this suggested remedy was rejected, the Board, on Sept. 10, 1942, issued its order which instituted the present proceeding. The Board instituted the action under section 401 (h) which reads in part as follows:

"The Authority, upon petition or complaint or upon its own initiative, after notice and hearing, may alter, amend, modify or suspend any such certificate, in whole or in part, if the public convenience and necessity so require."

The oral argument, with Henry J. Friendly contending for dismissal of the proceeding in behalf of Pan American and John T. Cahill, of Grace, vigorously opposing such action, centered largely around the interpretation of the meaning of the three words, "alter, amend and modify."

'Character Changed'

In its recent decision, the Board said: "We are of the opinion that this section of the Act does authorize the Board to add new points or services to the certificate of a carrier on the Board's own initiative and without application by, and the consent of, the carrier; but this authority does not include the addition of new service which would be so extensive as to amount to a new air transportation route, or of such a kind as to substantially change the character of a carrier's system."

The fundamental regulatory purpose which certificates of public convenience and necessity serve is to prescribe, and thereby control, the extent of the air transportation which each particular carrier may engage in, the Board said.

"The principal components of a certificate are the terminal and intermediate points and the classes of traffic to be served and, in view of the purposes of certificate procedure, it is clear that any other terms of a certificate are simply incidental to these major elements," the Board opinion stated.

"Under these circumstances," the opinion continued, "the conclusion is inescapable that when section 401 (h) provides that the Board 'may alter, amend or modify . . . any such certificate' it constitutes a grant of power to alter, amend or modify that which is the significant part of a certificate and which is the basis of operation of the certificate scheme as a regulatory device, namely, the terminal and intermediate points and classes of traffic authorized to be served. There is nothing in the usual and ordinary meaning of the words of the statutory phrase 'may alter, amend or modify any such certificate' which requires, or even justifies, a contrary conclusion."

In the oral argument, much had been made of the powers which Congress had given to other regulatory transport and utility agencies with reference to involuntary extensions of service.

The Board stated "In our opinion, however, an examination of these statutes reveals that they differ so greatly from the Civil Aeronautics Act in language and purpose, and in the factual situations to which they relate, that their relation to the problem before us is too remote to be significant."

Likewise reference to the legislative history of the Act was found to be of no assistance in resolving the question, the Board stated.

"Such material as the parties have presented as significant seems equally susceptible of being construed as supporting or as denying the existence of the power of extension," the opinion pointed out.

In deciding that the proposed extension would in reality constitute a basic transformation of the character of the carrier, the Board pointed out by giving Panagra a U. S. terminal, the carrier would have direct access to one or more major gateways for through traffic between the U. S. and Latin America. The extension, it was stated, would permit Panagra to connect directly with the domestic air transportation system of the U. S. without the necessity of relying upon the connecting services of Pan American. The mileage sought would increase the route mileage of Panagra about 1200 miles, or about 14% of its existing mileage.

Controversy Cited

The Board had this to say concerning the unpleasant internal relationships of the co-owners of Panagra: "Regardless of which of the co-owners of Panagra is at fault, the very fact that a controversy of this kind has developed indicates that an unhealthy condition exists in the internal affairs of the company. A decision by the Board, after consideration on the merits of the question of whether or not Panagra's routes should be extended to some point or points in the continental limits of the United States would remedy one particular controversy between the co-owners; but it would not solve the basic difficulties of the Panagra joint ownership.

"This is an inherently bad situation. Deadlock between the two interests equally represented in the ownership of the company is always possible, and certain to occur from time to time, especially in view of the special interests and the other activities of the two co-owners."

Relieved of Big Job

When CAB entered its order dismissing, for lack of jurisdiction, the Panagra-U. S. terminal case, CAB Examiners Francis W. Brown and Vincent L. Gingerich breathed a sigh of relief.

It relieved them of the necessity of writing a report based on 3,400 pages of testimony taken during a six weeks' hearing in New York last fall. This testimony related to the economic and public interest questions involved in extending Panagra's route some 1,200 miles, from Balboa, Canal Zone to some U. S. ports of entry.

This record will go into the archives of the Board and possibly will not be referred to again until some writer, years hence, decides to explore the difficulties which are encountered when two companies, equal owners of a subsidiary, try to agree on policies affecting their offspring—a legal entity with a split personality.

Pogue Reveals Why Increase in Take-off Weights Was Denied

L. Welch Pogue, chairman of the Civil Aeronautics Board, has made public a letter which he wrote to James P. Murray, president of the Aeronautical Chamber of Commerce, explaining the Board's action in turning down the proposals to increase the landing and take-off weights of certain transport planes.

Murray had written Pogue asking for the reasons on which the Board had based its decision, announced May 20.

Pogue's letter follows, in part:

"The Board's action was by a majority vote of three members. No one of the five members of the Board was willing to adopt the proposed regulation in its entirety. One member favored allowing the increase of landing loads on existing aircraft. Two members favored allowing an increase of take-off and landing loads in operations with cargo only. The action of the Board which declined to adopt the proposed regulation was based upon the following considerations:

'Shortage of Planes'

"The primary reason for the proposed increase in gross loads was the shortage of air carrier aircraft and the tremendous amount of personnel and cargo to be transported as a result of the war emergency. The Board concluded that situation had now been materially relieved by the return of a substantial number of airplanes to the airlines and the fact that still more are to be made available in the not distant future. Further, and a very important consideration, was the apprehension which was shown to prevail generally among the airline pilots that the increasing of the loads on the presently-used equipment (most of which had already had a considerable life) would lower the margin of safety, particularly under conditions of turbulence and single-engine performance. The Board thought that the basis for this apprehension might well be the subject of controversy, but that the universal existence of the fear which prevailed among the airline pilots could not be questioned and was a fact which in itself would constitute a hazard. The Board felt that the creation of a psychological hazard in the cockpit, especially under the strain of war, was not justified in view of the previously mentioned fact that the need for increasing the loads was rapidly disappearing.

"The Board also felt that to increase the loads on existing airline equipment over all the vigorous protests of the airline pilots might well create a fear in the minds of the traveling public which would adversely affect the development of air transportation. It seemed to be rather generally understood that the enactment into the Civil Air Regulations of the transport category requirements, on Feb. 6, 1942, to become effective on Dec. 31, 1944, was not to apply to the equipment presently in service on the airlines.

"The action taken by the Board on the proposed regulation to increase gross loads should not be construed as having any implications with respect to new models of aircraft which will become available in the future."

Mid-Continent Directors Re-elected

Members of the board of directors of Mid-Continent Airlines were reelected at a recent stockholders' meeting in Kansas City. Left to right in above photo are J. C. Collins, vice president and secretary; W. W. Howes, former assistant postmaster general of the U. S., who is a director; J. W. Miller, company president and a director; J. A. Zock, chairman of the board; T. N. Law, Milton McGreevy, and G. D. Murdoch, directors.

CAB Calendar

June 19—Oral argument on Detroit-St. Louis-Memphis cases (Docket 303 et al).

June 20—Prehearing conference on Florida applications, Eastern Air Lines, Inc. (Docket 489 et al).

June 27—Prehearing conference on applications involving service in the North-Central states, Automatic Air Mail, Inc. (Docket 415 et al).

July 17—Hearing on application of Postmaster General requesting award of air mail contracts to Alaska Airways, Inc. and Woodley Airways covering additional points in Alaska. (Docket 1315 et al) (Tentative).

July 24—Hearing on application of American Airlines for Board approval of its acquisition of control of American Export Airlines.

Aug. 1—Hearing on applications in Pacific Coast cases, Oregon Airways, Inc. (Docket 250 et al) (Tentative).

Sept. 5—Hearing on applications involving service in Rocky Mountain area, Ray Wilson, Inc. (Docket 152 et al) (Tentative).

Albert F. Beitel Resigns

Albert F. Beitel, an examiner for the Civil Aeronautics Board, resigned June 1 to join the law firm of Morris, Kixmiller and Barr of Washington. Beitel sat as the examiner in the Denver-Los Angeles route proceeding and recently figured in an investigation on postwar aviation in the local-feeder-pickup field.

Ex-Airline Pilot Sets Mark

Friends of Col. Clair A. Peterson have learned that he is the "Pilot Peterson" who recently flew an Army Mustang from Los Angeles to New York in the record time of six hours and 31 minutes. Peterson formerly flew for United Air Lines.

Western Air Elects Officers to Handle Consolidation Move

The first step toward consolidation of Inland Air Lines and Western Air Lines was marked by the election of William A. Coulter of Western as president and chairman of the board of Inland. The action followed CAB approval of Western's purchase of 83% of the outstanding stock of Inland.

Leo H. Dwerlkotte, Paul E. Sullivan and J. J. Taylor, officials of Western, also were elected to the board upon the resignation of Inland's former directors, Richard Leferink, president; Marvin Landes and Jerry Brooder, vice presidents; and Allen McLellan.

Inland officers resigned to elect Dwerlkotte executive vice president; C. N. (Jimmie) James, vice president of operations; Thomas Wolfe, vice president of traffic; Paul E. Sullivan, secretary-treasurer; J. J. Taylor, assistant secretary-treasurer; and R. K. Nichols, assistant secretary. With the exception of Nichols, formerly Inland Air Lines auditor, all officers hold similar positions with Western Air Lines at Los Angeles.

All Inland Officials Retained

Coulter said that all former Inland Air Lines officials will remain with the company—Leferink as technical adviser, Landes as assistant to James at Burbank, Cal., operations headquarters; and Brooder as regional traffic manager for the combined organizations of Western and Inland with offices at Denver.

Operating headquarters for Inland will be maintained at Cheyenne as in the past, Coulter said, but general offices will be located at Los Angeles. After 60 days, proceedings will continue toward the consolidation of the two organizations of Inland and Western as one operating unit, according to the chief executive. Coulter also stated that the remaining shareholders of Inland who hold 17% of the stock have been made the same offer as made by Western to the majority stockholders. Original purchase price amounted to $347,472 for 137,341 shares at $2.53 per, less adjustments.

Three Lines Recommended For New Services in South

THREE CERTIFICATED air carriers would be given important new air route extensions or additional intermediate points if recommendations of CAB Examiners Berdon M. Bell and Barron Fredricks are adopted by the Civil Aeronautics Board.

The examiners made their report May 30 in the Memphis-Oklahoma City-El Paso case and under the terms of their recommendations, the certificate of Chicago and Southern for Route 53 would be amended to include Little Rock, Ark., as an intermediate point between Pine Bluff, Ark., and Shreveport, La.; the certificate of Delta Air Corporation for route 24 would be amended so as to extend its route from the intermediate point Birmingham, Ala., to the terminal point Memphis, via Tupelo and certificates of American Airlines for Route 4 would be amended to extend operations from the intermediate point El Paso to the terminal point Tulsa, via Lubbock and Wichita Falls, Texas and Oklahoma City, Okla. and to extend its Route 23 from the intermediate point Little Rock, Ark., to the terminal point Oklahoma City, via Fort Smith, Ark. and Muskogee and Tulsa, Okla.

Braniff Plea Denied

Another recommendation of the examiners provided that the temporary restriction contained in the certificate of Eastern Air Lines for its operations to and from Birmingham, Ala., should be removed.

The examiners recommended denial of the application of Braniff Airways which sought an amendment to its certificate for Route 15 to designate Oklahoma City as an intermediate point and to extend the route from Oklahoma City to Atlanta, Ga. via Shawnee, Tulsa and Muskogee, Okla., Fort Smith and Little Rock, Ark. and Memphis, Tenn., or in the alternative, a certificate for a route between Oklahoma City and Atlanta via the foregoing intermediate points.

Likewise, the examiners recommended denial of the application of Continental Air Lines for a route between Tulsa and Hobbs, N. M. via Shawnee, Oklahoma City and Lawton, Okla. and Wichita Falls and Lubbock, Texas, and for routes between Tulsa and Memphis, via Muskogee, Okla. and Fort Smith and Little Rock, Ark. and between the Tulsa and Memphis, via Joplin and Springfield, Mo. and Jonesboro, Ark.

The applications in the case embraced an area from Atlanta, Ga. to El Paso, Texas via various intermediate points.

Atlanta-Memphis Service

The limitation in Eastern's certificate, which would be removed if the examiner's recommendations are followed, provided that Eastern could serve Birmingham only on flights originating and terminating at New Orleans or points south of New Orleans, and at Washington or points north of Washington. The removal of the restriction would enable Eastern to operate single-plane service between Memphis and Jacksonville, connecting Muscle Shoals, Birmingham, Atlanta and Macon.

The examiner stated that Delta is now operating between Atlanta and Birmingham, and only requires certification beyond Birmingham to Memphis to provide the proposed service. This will not involve or necessitate a through Memphis service to the West, the examiners stated. It will, however, provide direct service for the first time between Atlanta and Memphis.

With reference to the intermediate point Tupelo, the examiners stated: "In view of the vast territory and large population within a radius of approximately 100 miles of Tupelo without access to any air transportation, it is not unreasonable to foresee Tupelo as a substantial producer of air transportation.

The inclusion of Little Rock, Ark. on a permanent basis is the certificate of Chicago and Southern between Pine Bluff and Shreveport was recommended on the grounds of need for air transportation between Little Rock, Memphis, Shreveport, Houston, Chicago and St. Louis. C & S has been serving Little Rock on a temporary basis since March, 1943, on the basis of war necessity.

In recommending new service for American, the examiners stated that American's application for service between Memphis and El Paso, via Tulsa and Oklahoma City and other intermediate points is a part of its overall program looking toward the improvement not only of its transcontinental service but also of service to intermediate areas. While this service would increase American's route between New York and Los Angeles by 81 miles, the examiners stated that under the carrier's proposed nonstop operation between Nashville and El Paso via Oklahoma City or Tulsa a reduction from 2,663 to 2,580 route miles would be effected.

"This reduction would, it is argued, improve American's competitive situation as far as TWA and United are concerned. At present American's route is 164 miles longer than TWA's and 101 miles longer than United's. Establishment of the proposed route with nonstop operations would reduce this differential to 81 miles and 18 miles, respectively," the report stated.

"Approval of the American application in its entirety would make available to the important cities of Oklahoma City and Tulsa a direct single-company transcontinental air service. At present both of these cities must rely upon connecting service for transportation to the metropolitan centers of the East to the West Coast," the report revealed.

Experiments Slated on Air Shipment of Perishables

United Air Lines, Wayne University of Detroit, and the Great Atlantic and Pacific Tea Co. will soon undertake experiments exploring the full postwar possibilities of shipping perishables by air, according to a joint announcement by the three organizations.

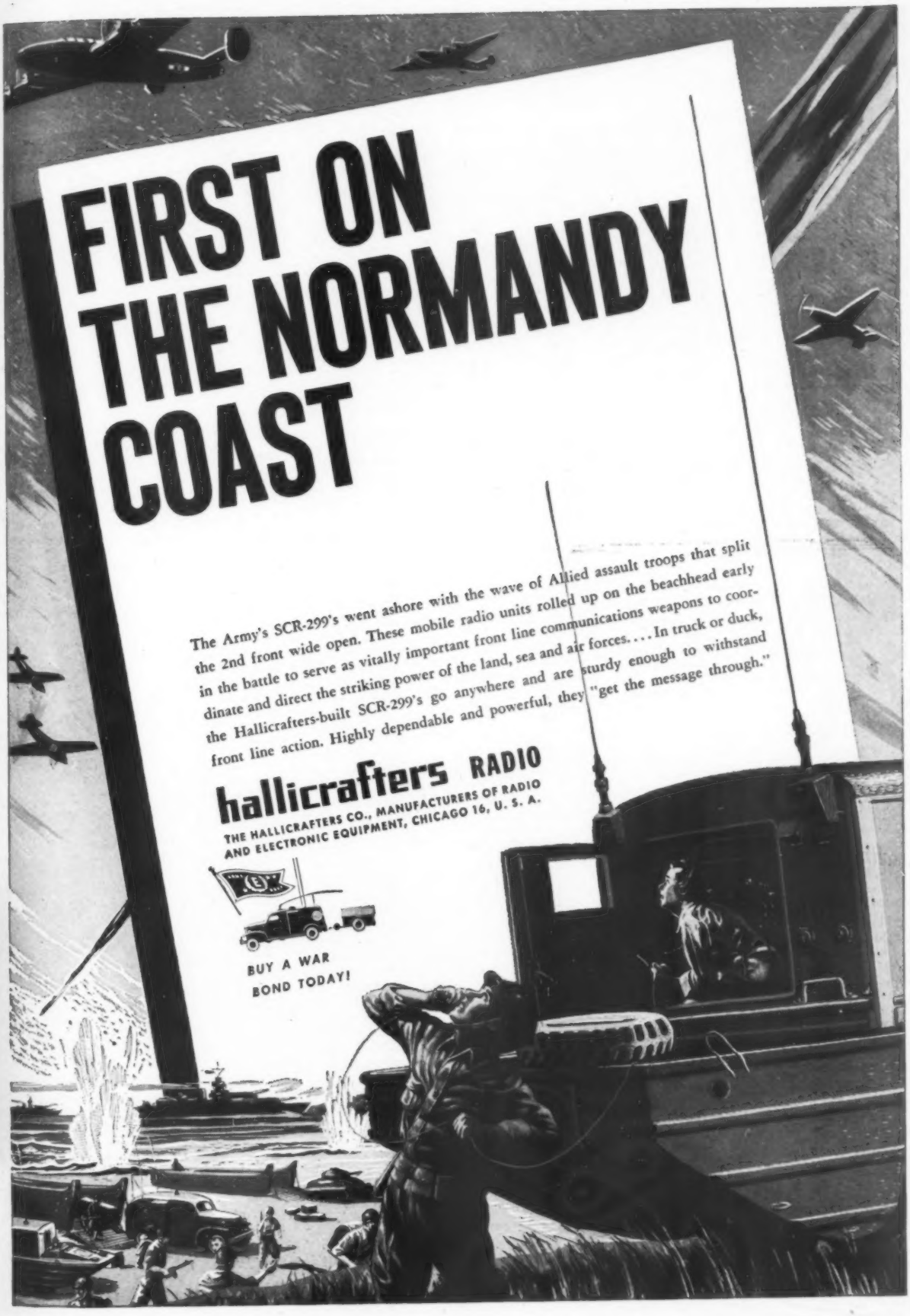
To set a postwar pattern, experimental airplane shipments of a wide range of perishable foods will be made from growers to a panel of produce experts in Detroit. All phases of marketing, from producer to consumer, will be studied in relation to new conditions arising from air transportation, the announcement said.

Another PAA Anniversary

Pan American Airways completed a year of uninterrupted service between New Orleans and the Canal Zone June 13. Five schedules weekly are flown both southbound and northbound. The service has brought the Canal Zone 11 hours from the United States.

EAL Officials Discuss Wartime Operating Problems

Eastern Air Lines' operating and traffic officials met in Atlanta last month to discuss wartime operating problems and plans for the future. Shown above, left to right, are E. E. Skinner, air cargo manager; G. M. Dyson, eastern region field supervisor; J. W. Moore, assistant secretary and assistant treasurer; Capt. E. H. Parker, eastern division operations manager; W. C. Gilbert, personnel director; T. P. Caldwell, southern division manager; S. L. Shannon, vice president-operations; Paul H. Brattain, first vice president; Walter Sternberg, assistant general traffic manager; R. D. Hager, central division manager; R. B. Braud, western region field supervisor; J. D. Lea, southwestern division manager, and Capt. L. H. Pabst, western division operations manager.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Denver-L. A. Case Brings Spirited Argument

Regional Company vs One-Carrier Link Big Point at Issue

THE BITTERLY CONTESTED battle for the air transport route between Denver and Los Angeles moved a step nearer decision during the fortnight when the Civil Aeronautics Board listened to the spirited argument of counsel representing the four airlines involved.

Described as a proceeding to bridge the last important gap in the nation's transcontinental air transport system, the Board must decide the case on two important considerations. The one is whether this route shall be added to the system of a transcontinental carrier and thereby provide the public with a new single carrier, single plane service, or whether it shall be given to a regional carrier, in the need class, through means of a connecting or interchange service at Denver.

As in the hearing, the argument brought spirited exchanges between counsel over both the monoply and interchange issues. Applicants for the route are: Western United, TWA and Continental.

Western built its case largely around interchange with United at Denver. Western's counsel, Hugh W. Darling told the Board that this was not essentially a new route proceeding but rather an attempt on the part of his company to improve the transcontinental part of its Route 13 by transferring the junction from Salt Lake City to Denver.

Interchange Argued

As Western and United are the only two carriers in the U. S. that have ever operated under an interchange agreement, this phase of the case received considerable attention in both the hearing and the oral argument. The two companies operated the interchange arrangement at Salt Lake City from Aug. 20, 1940 until May 22, 1942 when the agreement was voluntarily abandoned by both carriers because of war exigencies.

It appeared during the hearing and oral argument that Western minimized the problems which arose under interchange while United emphasized them. Darling emphasized that transferring the junction point to Denver would alleviate many of the obstacles which existed at Salt Lake City. He said the weather was better, pointing out that in 1942 Denver was below minimum less than 2% of the time. He said there were four alternate fields near Denver.

Despite the unfavorable weather at Salt Lake City, interchange was effected on 2,483 flights for a record of 96.4%, Darling said. The industry operating record for the year ended June 30, 1943 was 94.49% and United's system record for the year 1942 was 95.9%, Darling asserted.

"United has voiced a few criticisms of the interchange service. This was to be expected as the only possible support to United's position hinges on attempting to convince you that interchange service would not be in the public interest at Denver," Darling stated.

Paul M. Godehn, counsel for United, told the Board that a point of law was involved in the question of future interchange. He reminded the Board that the old agreement had died a natural death. The agreement was based on DC-3 planes to be interchanged at Salt Lake City and other specific considerations. The new service would have to be predicated on operation of DC-4 equipment.

"You can't decide this case on the assumption that Western and United will make an interchange agreement and that you will approve it. There is the risk that such an agreement cannot be maintained today because we are now parallel competitors. This creates animosities and different interests," Godehn said.

WAL 'Competitor'

United's counsel then pointed out that there would be reluctance on the part of his company's officials to "sit down" with Western officials to discuss new and improved flight equipment when it might be expected that Western would utilize these improvements to better its competing service with United between Los Angeles and San Francisco.

Godehn said that when interchange was effected with Western at Salt Lake City, they were allies and interchange was the only solution to a bad operating situation.

Godehn declared that during the time interchange was in effect at Salt Lake City, the two carriers saw a steady decline in their participation in transcontinental traffic. He said the decline was from 20.5% of the total transcontinental traffic to 10.7% when interchange was terminated.

Public Counsel Harry A. Bowen, arguing in favor of giving the Denver-Los Angeles route to Western, discounted the obstacles arising from interchange.

When Godehn was later asked by Board Member Harllee Branch whether the Board had the power to compel interchange, Godehn said the Act did not give the Board such authority.

He said United was not going on record as stating it would not enter such an agreement, but he cautioned the Board that interchange should be resorted to only to correct a fault, not to create another bad situation. He contended that the public had a right to receive the best service.

With reference to the economic phase of the case, Darling said that in excess of 50% of the traffic now being carried by Western over the Salt Lake City-Los Angeles segment would be transferred to the improved service by way of Denver.

Claiming that the Board had recognized, in the Acquisition case, Western's dual capacity of a local and transcontinental carrier, Darling read from the Board's opinion as follows: "From this and other facts of record bearing on the question, it necessarily appears that Western is both a transcontinental link and a regional carrier, playing an important role in each capacity."

Darling said the importance of the Los Angeles-Denver route is reflected in the estimated net operating incomes. Western's figure is $974,000. United estimated its revenue would be $1,195,000. Either would make a handsome addition to Western's financial position. "In contrast Western had an operating profit in 1943 of about $100,000 while United had seven million and TWA three million," Darling said. "The Los Angeles-Denver revenue would lead Western well out of the need class to a completely self-sustaining, self-sufficient and unsubsidized status." Based on the diversionary effect on its Route 13, Darling said that should the route be awarded to another carrier, Western would have to come to the Board for an increase of approximately $700,000 annually in mail pay.

Godehn, on the other hand, said that at worst, Western would suffer only a temporary hurt as far as diversion is concerned. He said Western would largely recoup any losses sustained by its Route 13 through new revenues from the Los Angeles-San Francisco route.

He asserted that Los Angeles, with New York and Chicago, were essentially long haul markets and that the Denver-Los Angeles route was inherently a segment of a natural, great circle transcontinental route.

He pointed to the Board's decision in the Dayton-Toledo-Washington case where the long haul factor had caused the Board to certificate two additional transcontinental carriers into the nation's capital. The record in this case, Godehn said, showed that American, with six schedules between Chicago and Washington, had been able to carry 55% of the through traffic while United, TWA and PCA with 28 connecting schedules had been able to get but 45% of the traffic.

Denver Called Isolated

TWA, through its counsel George A. Spater, told the Board that his company was the only one of the applicants for the Denver-Los Angeles route which could provide the new service without added expense. TWA planned to operate one of its transcontinental segments via Denver.

Spater emphasized that Denver was in need of better service to the east. He produced a number of charts, one of which showed the isolation of Denver from eastern metropolitan centers.

"The traffic from Denver to the east is three times as important as traffic to the west in terms of rail passengers and four times as important in terms of more recent hotel registration figures," Spater said.

"The service that United has rendered to Denver has always been poor. On the basis of schedules, quality of schedules (as measured in times of arrival and departure) and amount of space available, Denver appears to have had the worst service of any city of its size west of the Mississippi River.

"Between Chicago and Denver the annual air passengers, based on the three survey months of the Board, equal 9.05% of the rail travel. All other western cities greatly exceed Denver, running from

(Turn to page 51)

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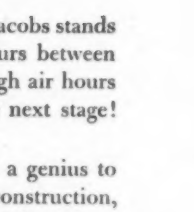

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JACOBS · **Pottstown, Pa.**

(Continued from page 46)

32% in the case of Salt Lake City to 127% in the case of Dallas," Spater declared. He said the same condition prevailed between Denver and New York.

Spater said those who regarded Denver as being off course for TWA were thinking "in terms of railroad concepts."

"A great circle course from Los Angeles to New York, which will be flown in an airplane like the Constellation, would operate within a few miles of Denver," he added.

Local Service Stressed

In connection with the reference to Constellation, Spater said the direct course between Denver and Los Angeles would require operating at 15,000 feet for about an hour to clear the peaks west of Denver.

"This will mean that the operator will have to provide aircraft with a pressure cabin to maintain adequate oxygen for the passengers. TWA, not United or Western or Continental, has been responsible for the development of the pressure cabin," Spater stated.

Terrell C. Drinkwater, vice-president and general manager of Continental, emphasized the potentialities of local service on the Denver-Los Angeles route. Taking an opposite view of the other carriers, Drinkwater said the predominating traffic would be local in character and that the local service could best be performed by a regional or local carrier.

Charges Made Against WAL

He urged the Board not to consider the Inland Acquisition case in reaching its decision in this proceeding. Charges had been made that Western, through purchase, had acquired some lean routes in the Northwest and that it was emphasizing the need for improving the revenue possibilities of its Route 13, via Denver to Los Angeles instead of by Salt Lake City, to take care of the deficiencies of other parts of its system.

Drinkwater, like Godehn, charged TWA with an attempt to retry in this proceeding the Denver-Kansas City case. In that case TWA was denied the route and Continental was given the certificate.

"TWA is endeavoring to parallel our operations almost before we have been able to start them." Drinkwater said. Drinkwater also said Denver's poor showing as an air traffic center was due largely to the three streamline trains which operate to the east, not reasons ascribed by TWA.

Takes Off 'Rough Edges'

Pennsylvania-Central Airlines has introduced a program of indoctrination designed to take the "rough edges" off the procedure of inducting new employes into jobs. The program consumes two full days, during which the new worker is not permitted to go near the work for which he was engaged. Instead, he is given a concentrated course of instruction familiarizing him with the full scope of PCA's operations. He learns about the company's history, its aims and aspirations, and is introduced to key personnel.

Alaska Case Underlines Difficulty of Comparison With U. S. Decisions

THE LAISSEZ FAIRE character of air transportation development in Alaska was given another airing in aviation circles recently when the Civil Aeronautics Board listened to oral argument on Alaska Airlines' application for approval of its acquisition of Cordova Air Service.

Alaska Airlines, April 12, 1943, entered into an agreement to purchase the assets of Cordova, including its equipment and technically its certificates to 720 miles of routes, for $30,000. Cordova had appraised the value of its equipment, exclusive of shop equipment, supplies and automotive equipment, at $29,600. Its book value was listed at $14,922.

United-Western Case Cited

Expansion and development of Alaska's air transport system, which has attained new importance because of the war, is now under the supervision of CAB but almost every Alaska route or acquisition case, as in this proceeding, demonstrates the difficulty of using the experience of U. S. air transport as a basis of comparison.

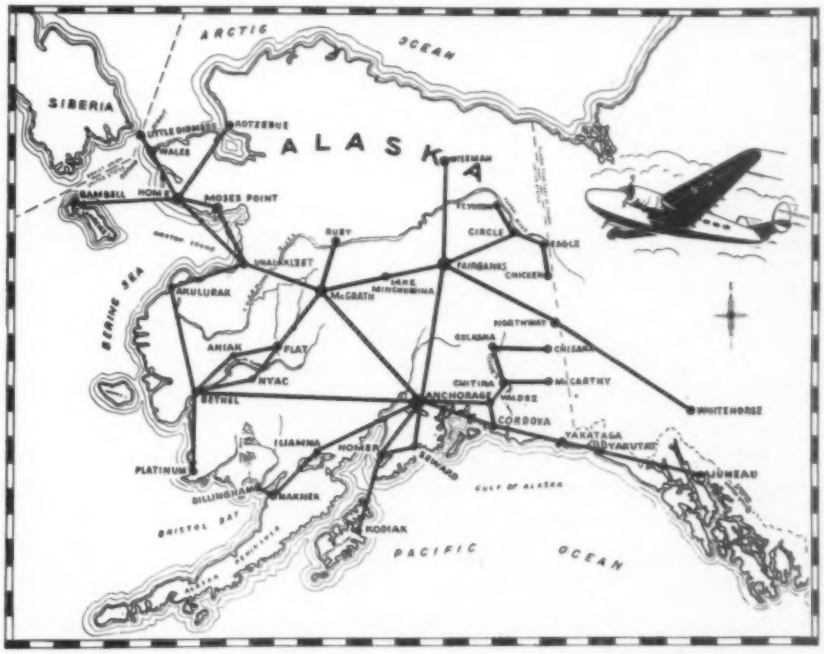
This became apparent when counsel, arguing against approval, cited the Board's adverse decision in the United-Western acquisition case as being on "all fours" with the present acquisition. John W. Cross, counsel for Alaska Airlines, said that aside from the disparity in the character of the respective operations, there were two vital distinctions.

The one was that United, in the Western purchase case, was buying out a competitor and the Board denied approval largely on that ground. Cross claimed that in the present case, Alaska Airlines was not buying out a competitor. The other distinction, Cross stated, hinged on the economic standing of the two companies. Western, he said, was economically sound and capable of continuing operations. While statements to the contrary were read into the record, Cross cast doubt that Cordova could continue on an efficient service basis if the Board denied approval.

The charge was made by Louis K. Goodkind, public counsel, that Alaska Airlines had made full use of the development period immediately ahead of the Board's Alaska Air Transportation Investigation of 1942, out of which the Grandfather certifications came. He pointed out that from 12 routes involving 2,600 route miles, the company had expanded to 33 routes and 6,640 route miles in two months.

"These purchases of other airlines were made on the cuff, in fact on many cuffs. The expansion was made on mortgages and promises during a period when the

Alaska Airlines Operator Extension System



Shown above is the extensive system of air routes operated by Alaska Airlines, largest operator in the Territory. The company, headed by W. N. Cuddy, has taken over Alaska Star Airlines, Pollack Airlines and Lavery Airways. It operates a fleet of 40 planes, including Lockheed Lodestar, Stinson A, other multi-engine ships and single-engine ski and float equipment.

company's actions were not under review of the Board. These activities placed Alaska Airlines in a predominant position in Alaska aviation." Goodkind asserted.

He argued that approval of the acquisition would not be in the public interest and that because of what he termed was Airlines precarious financial position, the additional financial obligation might result in the company's financial collapse or necessitate its preservation at considerable public expense. He said that the record showed that the company had $418,000 in current assets against $636,000 in current and long term liabilities, that its assets were represented by $206,000 in slow accounts receivable and all but $35,000 of the balance was represented in inventories such as oil, gasoline, motors, planes and equipment.

Airlines was described as a Wall Street colossus by Gerald P. O'Grady, counsel for Woodley Airways, an intervener. O'Grady said Airlines had embarked on an expansion program three years ago which had upset the competitive balance of the air transport system of Alaska. He stated that Airlines competed with Woodley over all but 200 miles of route and served 21 of the 25 points on Woodley's routes.

Quick Decision Asked

The Board must decide the case on two major issues. The first is whether the acquisition, which will give Alaska Airlines approximately 6,800 miles compared to 9,660 miles of routes by independent operators, is in the public interest and whether the expenditure of the $30,000 will place an undue burden on what CAB Examiner Lawrence J. Kosters and Goodkind described as the strained and precarious financial condition of the purchaser. Kosters, in his report to the Board March 28, recommended that approval be denied.

Cross argued that the purchase price was fair and reasonable, asserting it was under a figure which Cordova undoubtedly could have obtained. He stated further that the record amply demonstrated that the resale value of the assets acquired are equal or exceed the purchase price and further that these routes may be successfully and profitably operated by Alaska Airlines.

"The exhibits filed show that as of Oct. 31, 1943 the ratio of current assets to current liabilities was better than two to one—$418,000 to $184,000," Cross stated.

John S. Wynne, counsel for Cordova, read a telegram which had just been received from Cordova officials in which they asked that the Board expedite its decision, so that if the application were denied, Cordova would be able to resume operations during the lucrative summer season.

Cross in his argument referred to evidence in the record which indicated Cordova had operated during the previous two year period with "two pilots, one mechanic and several helpers," as casting doubt whether the company could perform an efficient and adequate service. He also stated that officials of Cordova had come to Alaska Airlines with their proposals to sell their company.

San Antonio Service Aug. 1

American Airlines will inaugurate air service to San Antonio on or about Aug. 1, according to Charles A. Rheinstrom, vice-president in charge of traffic.

CMA Employes Honor Manager

Wilbur L. Morrison, general manager of Compania Mexicana de Aviacion, Affiliate of Pan American Airways, is shown with department heads after receiving a medal recently in recognition of his efforts to help workrs improve their social and economic standards. Two men on extreme left are unidentified. Starting third from left are Frank Fields, operations; Mr. Morrison, Maurice Hugo, maintenance; Antonio Gonzalez Mendoza, personnel; Samuel Zavaleta Leyva, secretary of Aviation Workers' Union; Jose Chaveza, meteorology; and Dudley Martin, chief engineer.

Monopoly by Default Threatened Unless U.S. Sets Air Policy, Export Official Says

PAN AMERICAN AIRWAYS will have a monopoly in postwar air transportation by default unless the United States establishes a national policy choosing between monopoly and competition, John E. Slater, executive vice president of American Export Lines and American Export Airlines, warned last month in an address before the Institute of Transportation in New York.

"The history of American international air transport up to the present has been to a very large extent the history of one company," said Slater. "For more than 15 years this company has successfully developed international air routes in Central and South America, the Pacific, and to a somewhat less degree in the North Atlantic. American Export Airlines is the only other company that has certificates for overseas air transportation. It is obvious, therefore, that unless a policy of competition in international air transport is to be re-affirmed and substantial international routes are to be allocated to American Export Airlines and other American companies, Pan American Airways will secure a monopoly by default."

Slater declared for the principle of regulated competition, stating that this would reduce costs and rates.

"With a single American company in the overseas field there would be no measure of its costs," he pointed out. "If there be no second company to form a basis of comparison, the single company has little urge to reduce costs. Mail pay or subsidy are measured in part by costs. With no such measuring stick, the taxpayer will pay more for his overseas operations."

Regulated competition means the building up in peacetime of a number of organizations with the background and experience of long-range operation which would be available for armed forces in time of war, Slater observed.

Other highlights of the speech were:

● "A single company inevitably would become a political instrumentality too powerful for the public good of this country . . . having to utilize the services of a diplomatic corps as large as that of the State Department . . .

● "A single company would be more interested in present profits than in the future development of American international aviation.

● "A monopoly in the foreign field would ultimately drift into bad practices and abuses—political and otherwise—which would result in investigations and adverse public reactions.

● "A single company almost certainly would attempt to form a cartel of a number of 'chosen instruments.'"

Houston-Amarillo Route to be Opened By Essair, Inc. Soon

Essair, Inc., newest airline to receive a Federal certificate of convenience and necessity and the first new domestic air transport passenger carrier to be certificated outside of the Grandfather clause of the Civil Aeronautics Act, expects to start scheduled operations between Houston and Amarillo sometime this month.

The company has made exploratory flights over its new route and has obtained, it is understood, three Lockheed Lodestar planes for the opening of service.

Essair obtained a temporary certificate from the Civil Aeronautics Board Feb. 1 after the Board had re-opened the famous Texas cases. The certificate is to expire Dec. 31, 1946. In granting the certificate, the Board stated it wished to have the benefit of Essair's experience in the determination of future policies with reference to the development of local air transportation. In addition to the terminal points—Houston and Amarillo—Essair also will serve Austin, San Angelo, Abilene and Lubbock.

The company recently has been engaged in refinancing activities. It is understood that Maj. William F. Long, president of the Dallas School of Aviation and widely known in southwest aviation circles, has subscribed for a considerable block of stock in the new company.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Pan American Rate Argument Reveals Six-Million-Dollar Error

THE CIVIL AERONAUTICS Board has under consideration the oral argument in the Pan American rate case, Latin American division. The principal issues hinge about the treatment of excess earnings for rate making purposes and a determination of whether the carrier, as of Sept. 1, 1942 was on a self-sustaining basis or in the need class.

The oral argument brought to public attention a $6,034,746 error in the Board's calculations as announced in its rate order of Aug. 28, 1942. This error formed the basis for Pan American's petition to have the case re-considered. This sum represented Federal funds which had been advanced to Pan American Airports Corp. in connection with its war service activities.

Henry J. Friendly, counsel for Pan American, argued that the Board should now do what it intended to do August 28, place the carrier on a compensatory mail rate basis as of Sept. 1, 1942 and fix the rate in harmony with the more liberal rates which the Board had allowed at that time to domestic carriers. He said even if the Board allowed the carrier the minimum compensatory rate, it would be better off than if continued in the need class. The reason for this is that mail pound miles actually carried were considerably above Board estimates and on a compensatory basis, Pan American would realize considerably more than if the mail rate were allocated on the need basis.

Excess Earnings

Some $6,500,000 in excess earnings figure in the equation and it is the Board's treatment of this figure which will probably determine whether the carrier was on a self-sufficient or need basis Aug. 28, 1942.

Mortimer Weinbach, public counsel, argued that the figures showed that Pan American was on a need basis. However he contended that if the Board used all or a portion of the excess earnings in the carrier's investment base for rate purposes, it should sterilize these earnings so that Pan American could not come in at some later time and ask that these excess earnings be used as a basis for a need rate.

When Weinbach suggested that Friendly state his attitude regarding such conditional treatment, Friendly told the Board that it had not occurred to him that such a condition would be raised. He said he had not talked to company officials about such a possibility and that his own inclination was to recommend against such an agreement.

Harllee Branch, Board member, engaged in a verbal tift with Friendly over both the treatment of the excess earnings and also over what Friendly had termed a fair and reasonable rate of return, comparable to what the Board had done for other carriers.

Branch inferred that it was Pan American strategy to have excess earnings allocated to the investment base for rate purposes as of Sept. 1, 1942 and that later, with war contracts completed and operating costs rising, the carrier would be back before the Board requesting a need rate but based on the higher investment base.

Friendly said all the carrier was asking was a fair and reasonable compensatory rate in keeping with the Board's more liberal treatment of domestic carriers. Branch reminded him that he had filed a dissent in these higher rate decisions but Friendly said for the purpose of the instant proceeding, the majority action of the Board controlled.

Two Bury the Hatchet

When Friendly referred to a Board tendency to fix rates on a hind-sight basis, Branch said: "I don't want to get into an altercation with you but will you please give an instance where the Board has been to blame."

Friendly replied: "I don't want to get into an altercation with you either but I can give you some dates where the Board has heard the argument and the delay in the decision certainly hasn't been on our part."

Branch and Friendly later exchanged pleasantries. After adjournment, Friendly went to the bench where he and Branch shook hands.

Before the formal argument closed, Friendly, said he believes a .58 of a mill per pound mile would be a fair rate, consonant with what the Board has been allowing domestic carriers. He said this would permit an approximately 25% return on investment, which he asserted is considerably lower than the return being allowed Domestic carriers.

Service to Varadero Started

Compania Cubana de Aviacion, S. A., an affiliate of Pan American Airways, has inaugurated daily service to and from Varadero Beach, Cuba, on the regular route between Havana and Cienfuegos.

Alaska Speed Record Set

United Air Lines, flying for the Air Transport Command, in Alaska, has established what is reported to be the fastest flight on record between Anchorage and Seattle.

Using a C-47, Capt. Hugh C. Worthington made the trip of more than 1,500 miles in six hours and 43 minutes, stopping only once, at Annette Island. He averaged 225 miles an hour.

Intrastate Line Begins Service in Oklahoma

An intrastate, nonscheduled air service between Oklahoma City, Duncan, and Lawton was instituted this month by a new company, Central Airlines, Inc.

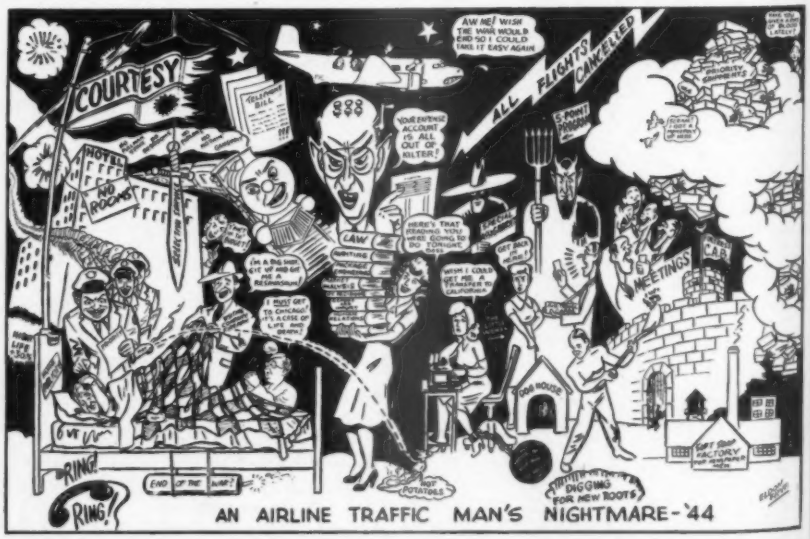
The line now is carrying passengers on a contract basis, but is seeking Civil Aeronautics Board approval to extend its routes into Texas. The proposed interstate routes are: Oklahoma City to Fort Worth, via Chickasha, Duncan, Lawton, Frederick, Wichita Falls, Graham, Ranger and Mineral Springs; Oklahoma City to Tulsa via Shawnee, Seminole, Ada, McAlester, Okmulgee and Muskogee.

The company officials are: Guy O. Marchant, president; Keith Kahle, vice-president and general manager; L. L. McMillon, operations manager and chief pilot; and Edwin K. Cornish, traffic manager.

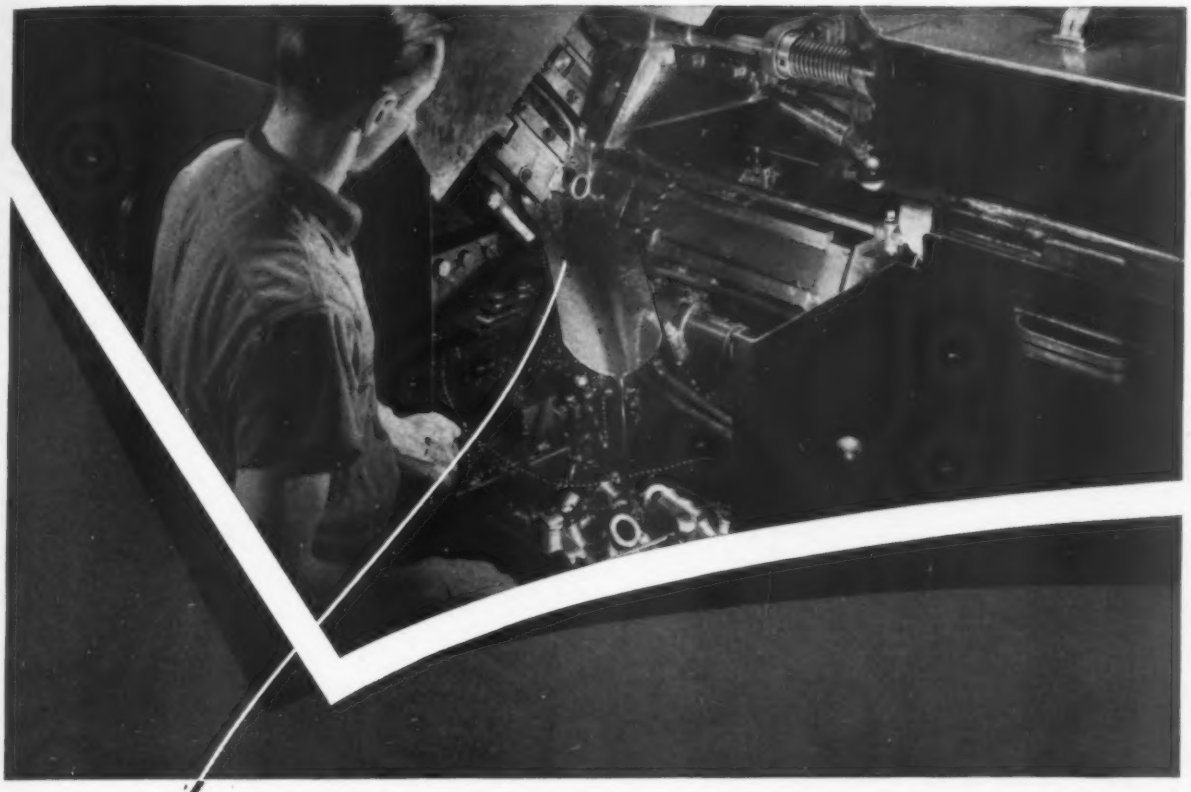
A five-place Stinson Reliant SR9B is in use and a second Stinson is being negotiated for.

TWA Adds Coast-to-Coast Trip

Transcontinental and Western Air on June 1 inaugurated its ninth daily transcontinental round-trip flight under authority of the Civil Aeronautics Board. The new flight was made possible by extending a New York-Kansas City schedule to the West Coast.



TWA Cartoonist Eldon Frye has drawn this amusing cartoon showing an airline traffic man's nightmare. Frye has been commissioned a lieutenant (jg) in the Navy and is now in training.



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Early Fixing of World Air Policy Forseen by Head of Mexico Line

ALL SIGNS point to an early development of international air policy, in the opinion of Hollis R. Thompson, president of American Airlines de Mexico and vice-president for American in charge of route developments.

Basis for his optimistic views, expressed during an interview in Los Angeles where he talked in connection with the observance of Foreign Trade Week, is the activity of Congress, the State Department and the Civil Aeronautics Board during recent months.

Personally, Thompson said he hoped "the policy would endorse regulated competition as proved in the domestic pattern; that the government will conserve for us at least equal rights to all bases and airports built largely with American funds."

He emphasized that "our aviation is at least five years ahead of the world and this is our opportunity to play a dominate part in world air transport."

Interested in Panama

On the subject of route developments for American, Thompson said the company was interested in routes to Panama but stressed the fact there were no specific plans yet to carry out filings. He also stated that AAL was casting no glances toward the Pacific and that no decision has been made on withdrawing American's application for Atlantic service to London, in view of the pending AAL-AMEX case.

In discussing air transport in Mexico, following two years in Mexico City before moving his headquarters to New York recently, Thompson had high praise for the nation's air-mindedness, "sold or more sold on aviation than United States citizens," and for Mexican pilots. He foresees a good market for cargo and passenger aircraft, designed specifically to meet the needs of domestic travel both in Mexico and other Latin American countries.

Equipment in the United States, both for international operations and domestic, will consist of converted aircraft for at least 18 months after the war, he said. After that, Thompson epects to see the new transports of 300 mile-an-hour speeds, carrying upwards of 40 passengers, designed for economical operations which will "allow us to compete in price for all railroad passengers, not just the pullman travelers already in our cost range."

Urges Understanding

During the interim, he looks for the government to lease the aircraft for a reasonable length of time. "We know from our trans-Atlantic operations for the Air Transport Command that the DC-4 is a capable and well-designed airplane, that we can fly it and make money in commercial operations."

During his Foreign Trade Week talk before the Foreign Trade Association of Southern California and the Los Angeles Rotary Club, Thompson said:

"Plans for foreign trade and international air transport must be developed in a common atmosphere and in complete understanding of the inter-relationship of the two. This would seem to necessitate the development first, of a foreign policy, sound and serviceable; second, an important adjunct to that foreign policy, an adequate commercial policy and finally an international air transport policy designed to serve the interests of the United States in world-wide aviation.

"The airplane of the foreseeable future is not an active competitor over long international sea routes with ocean borne commerce. The most optimistic of those engaged in air transportation business cannot see a rate per ton mile that in any way will compete with ocean-going freight during the immediate postwar period. While undoubtedly future development of aircraft will make a constantly lower rate possible, and while I feel the airplane will carry a considerable portion of the traveling public overseas, together with a large amount of air express and light freight, we will still occupy a supplementary role to ocean borne commerce."

'Precursor, Catalyst'

Thompson sees the role of air transport as the precursor of world trade and at the same time a catalyst for all of our trade processes. "Before boatloads of our nation's products, must go men and messages, salesmanship, samples and service. These negotiating functions of our trade center around time; the speed of accomplishment feasible in this stage of the game is a measure of our success. It is to these functions of United States international trade that air transport is destined to give service."

Sternberg Promoted by EAL

Walter Sternberg, assistant general traffic manager of Eastern Air Lines, who has been associated with EAL and its predecessor, Eastern Air Transport, since 1930, has been named general traffic manager. His first position with EAL was operations and traffic representative at Miami. Three years later he was named DTM at Jacksonville, and in 1937 DTM at Chicago. In 1940 he became Northwestern division traffic manager, and in 1942 assistant to the first vice-president with headquarters in New York. He was appointed assistant general traffic manager in March, 1943.

Sternberg

In Phoenix for AA's Regional Meeting

The semi-annual regional meeting of American Airlines Station Managers held in Phoenix recently was attended by: (seated left to right) H. L. Whitmore, southern superintendent station operations; Ben C. Fidler, station manager Tucson; E. V. Fox, station manager Phoenix; Miss Birch, secretary to Fox; David O. Easton, station field supervisor Fort Worth; (standing left to right) E. W. Mueller, station manager El Paso; James E. Gainer, station manager Burbank; Ray Dumm, station manager Long Beach; T. W. Brooks, director of station operations; H. M. Willson, station manager Palm Springs; L. J. Busch, station manager San Diego.

Braniff Gets Mail Permit

Braniff Airways has received authorization from the Post Office department to carry Mexico City mail on its morning flight out of San Antonio. Connections will be made at Nuevo Laredo with Compania Mexicana de Aviacion. Mail arriving in San Antonio in time to clear the censor's office will be dispatched on the flight leaving at 10:40 A. M.

St. John Route Planned

In anticipation of inauguration of service to Blissville, New Brunswick, Trans-Canada Air Lines have opened a ticket office in the Admiral Beatty Hotel in St. John. Start of the proposed service via St. John to Halifax and Sydney, Nova Scotia, would coincide with the completion of airport facilities at Blissville which will serve St. John.

CONTINENTAL AIR LINES has established a new southern anchor point in south Texas with the inauguration of air service between El Paso and San Antonio May 1, directly linking Midland-Odessa, Big Spring, and San Angelo.

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Women in Air Transport

(This is the eighteenth of a series of articles on women who are doing an outstanding but little publicized job for the U. S. airlines.)

IRIS BEALS was attending high school when she decided that she wanted to get into aviation, so she did something about it. She quit school and went to work as an airline ticket agent in a Boston travel bureau.

Seven years ago, Miss Beals joined United Air Lines when the company opened its Boston office. Her efforts were rewarded—she is now acting district traffic manager for the company in that city.

Although born in Canada, Miss Beals is an American citizen. She spent most of her youth in Louisiana and attended high school in Millis, Mass. Speaking of her work she says, "This is the only thing I ever really wanted to do and I've stuck with it." The greater part of her work now is handling Army and Navy transportation, as well as that of private concerns with priorities.

She believes that the war has given women their greatest opportunity to get into air transportation. "Girls are now working as passenger agents, making traffic sales and reservations, and doing it very well, too," she says. "Before the war there were few women at work at airline ticket counters. Now they are proving themselves ideal for the job."

Stock Case Hearing Held

Hearing on the application of Pan American Airways for approval of the transfer of the 45% of the stock which its subsidiary, China Airways Federal, Inc., U. S. A. holds in China National Airways to Pan American Airways, Inc. was held recently before CAB Examiner H. Heinrich Spang. The application seeks a further approval of the transfer of this stock, through a dividend arrangement, from Pan American Airways, Inc. to Pan American Airways Corp., the parent company.

H. B. Hibbard, vice president and director of China Airways Federal, was the only witness. He testified that if the stock transfer was approved, China Airways Federal, a holding company, would be dissolved.

Airline Commentary

People are still filing applications with the Civil Aeronautics Board to go anywhere and everywhere . . . With this thought in mind we took steps last week to find out if there wasn't at least one airline that didn't want to operate to distant points outside the U. S. . . . And believe it or not, we found one—just one . . . It's Continental Air Lines, which has at various times been called a feeder line, a regional carrier, a "little" airline—and has also been called various other things by opposing lawyers in CAB hearings . . . Anyhow, we think it's news that one carrier plans to stay inside the U. S. . . .

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Now we would like it distinctly understood that we take absolutely no sides in this column as to whether there should be "free enterprise" in worldwide aviation (as advocated by the 17 airlines' committee) or whether there should be a "chosen instrument" of some kind (Pan American Airways) . . . And we care even less what one side says about the other . . . What we are about to report would have been reported in exactly the same way had it happened to the other side . . . With that qualification, here's what happened: Pan American publishes a very nice magazine called "New Horizons," which reports newsy stories from all parts of the PAA system . . . And this magazine accepts advertising . . . Well, for the May issue the company scheduled an ad for the inside front cover, the ad paid for by an aviation equipment manufacturer . . . This was all well and good until is was discovered that the advertiser was playing up and telling the story of American Export Airlines! . . . Now PAA and Amex have not exactly been going out of their way to advertise each other . . . But the magazine had been printed by the time somebody discovered the ad . . . Not to be outdone, however, PAA ran this inside cover page through the press again, so that when you turn to it you see a silver page urging you to "Buy War Bonds" . . . As a matter of fact, these words appear 220 times . . . However, if you hold the page up to the light—as only one in a million will do—you can read the story of Amex—one of the 17 airlines, with such statements as "This is the story of American Export Airlines, a story of American enterprise, know-how; the will to win" . . . We congratulate PAA on a good job of getting out of an embarrassing situation . . . We think Amex would undoubtedly have done the same thing, had the shoe been on the other foot. . . .

●

Jerry Dobben, who covers the CAB for this publication, was called upon to umpire a baseball game recently—at least he said it was supposed to be a baseball game . . . Also umpiring was Terrell Drinkwater, executive vice president of Continental Air Lines . . . Now we don't often report baseball games, but the next day Dobben wrote us the following note, which we think you'll enjoy:

"What I am about to write has little connection with aviation, in fact the only connection is that the principals who figured in this comedy of errors are CAB examiners and CAB public counsel lawyers who daily deal with administrative procedures affecting the air transport industry.

"One evening two weeks ago, these two groups met in the lengthening shadows of the Washington Monument and played a game of indoor-outdoor ball which should end all indoor-outdoor ball games. The Public Counsel boys won 20 to 12 and it was hours later before the laughter of the spectators had subsided.

"Ed Leasure, Chief CAB Examiner, suffered a badly sprained right wrist and several of his teammates, near stretcher cases, smelled strongly of liniment the next day.

"H. Heinrich Spang started the pitching for the Examiners with J. Francis Reilly catching. Now Spang throws what might be termed a helicopter ball. It hovered over home plate just long enough for some of the husky Public Counsel boys to put a lot of wood on it. This would set Leasure, left fielder, in motion, usually in the wrong direction. Because one of the balls went past him so fast and was last seen entering the portals of Smithsonian Institution, the game may go down in history. Francis W. Brown, assistant CAB Examiner, did several ground loops between 3rd and Home and when he regained consciousness, the first question he asked : 'Did my score count?' It did.

"Reilly was caught off first base while watching a game between two teams of WAVES on the adjoining diamond. Nevertheless it was Reilly's chatter that kept up the morale of the examiners although his spirit too hit a low ebb in the fourth inning when the P.C. boys batted around twice and thereby placed all of the Examiners in double jeopardy—a situation which is unconstitutional everywhere except on the ball diamond.

"John H. Wanner, newly appointed assistant general counsel, played a stellar game at short, ably assisted by Harry Bowen and D. Franklin Kell. Melvin Cohen's baffling speed kept the hits by Examiner batters well scattered.

"The game developed several arguments, legal and otherwise. Once it was necessary for Terry Drinkwater, the umpire, to quote the rule in Shelley's case before a dispute could be settled.

"As might be expected, there's going to be a return game. Gen. Hershey is to be an invited guest. It'll be one sure way for all of the players to get classified as 4F."

Eric Bramley

U. S. ARMY AIR FORCE PHOTO

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Flood of New Applications Reaches CAB Docket Section

ACTION OF THE CIVIL Aeronautics Board in initiating hearing procedures on some 200 applications for new or amended air routes has had the effect of stimulating the filing of new route applications during the past two weeks.

About a month ago, the Board set the dates for four prehearing conferences representing applications on file for service in the New England, Florida, Texas-Oklahoma and midwestern sections of the country. Because of a desire to have their cases considered in these area hearings, many new applications were rushed to the Board ahead of the prehearing conferences.

Thirty applications were filed during the two weeks period ending June 7, several of them a day or two before the prehearing conference on Texas-Oklahoma applications which was held June 7.

Included in the group were four companies sponsored by Braniff Airways, Inc. in accordance with the carrier's plan for establishment of trade area feeder lines. These included Great Plains Airways, Inc., of Amarillo; Lone Star Airways, Inc. of San Antonio; Oklahoma Airways, Inc., of Oklahoma City and Texas Central Airways, Inc. of Dallas. All of these companies asked for exemptions from the provisions of Section 401 (f) of the Act in so far as naming definite points in the certificate is required so that the companies might be given blanket authority to inaugurate and suspend service to cities and communities in a large number of designated counties on the basis of public need.

A short summary of the applications filed during the last fortnight follows:

Braniff Airways, Inc.

This carrier has filed an amendment to its Route 9 asking that Tulsa be included as an intermediate point between Kansas City and terminal point Dallas. (Docket 1419) The company also filed an application asking the Board to amend its certificate for Route 50 so as to authorize air transportation of persons, mail and property between terminal points Corpus Christi and Laredo, via the intermediate points Kingsville, Falfurrias and Hebbronville, Tex., between the intermediate points, Alice and Benavides, Tex., and between the terminal points, Laredo and Brownsville, via Rio Grande City, McAllen and Harlingen. (Docket 1423)

Central Airlines, Inc.

This applicant of 637 Commerce Exchange Building, Oklahoma City, (2) Okla., through Keith H. Kahle, vice president and general manager, filed for two routes. One would operate between Oklahoma City and Fort Worth-Dallas via Chickasha, Duncan, Lawton, Frederick, Okla., Wichita Falls, Graham, Ranger and Mineral Wells, Texas—a distance of 401 miles; the other between Oklahoma City and Tulsa via Shawnee, Seminole, Ada, McAlester, Okmulgee and Muskogee. Applicant desires to carry passengers, property and mail and would use single and dual engine planes. The company proposes to start operations with a single engine five-place Stinson Reliant. (Docket 1417)

Chicago & Southern

This carrier filed an application requesting that its Route 53 be amended so as to include Beaumont-Port Arthur, Texas as an intermediate point between intermediate points Shreveport, La. and terminal point Houston. (Docket 1436)

Community Air Service, Inc.

Applicant of Fort Worth, Texas, has filed for six routes for air transport of persons, property and mail between the following terminal points: three circular routes originating and terminating in Fort Worth, two originating and terminating in San Antonio and one starting and ending in Houston. Forty-eight intermediate points were named on these routes. The incorporators of the company are: George J. Newman, E. J. Tynan and R. W. Cantwell. There are 4,249 route miles embraced in this application. (Docket 1429)

Continental Air Lines, Inc.

This carrier asked the Board to amend its certificate for route 29 to provide service between San Angelo and Fort Worth-Dallas, via Brownwood or other cities that the Board may designate. (Docket 1438). In another application Continental asked that its certificate for Route 43 be amended to provide service between Tulsa, Okla. and Dallas-Fort Worth, via Sherman-Denison, Texas and other points that the Board may designate. (Docket 1439)

Dayton & Western Ohio Airlines, Inc.

This company of 19 South Kenton St., Dayton, O., asked a certificate for three air transport routes for transportation of persons, mail, baggage and light express between Cincinnati and Columbus between Dayton and Toledo and between Cincinnati and Richmond via numerous intermediate points. Applicant proposes to use suitable aircraft including helicopters when they are available. Robert M. Kelly is secretary-treasurer of the company. (Docket 1427)

Durham-New York Helicopter Service, Inc.

Applicant of East Durham, N. Y. asked for a route between New York City and Sharon Springs, via Catskill, Cairo, East Durham, Cooksburg, Middleburg and Cobleskill. Applicant desires to carry persons, property and mail and integrate its air service with surface passenger operations. Andrew E. Zimmer is president and principal stockholder. (Docket 1437)

Fidelity Fireproof Warehouse Corp.

V.A.C. doing business as *Fidelity Fireproof Warehouse Corp.*, 153 East 87th Street, New York, filed for a certificate to engage in air transportation of household goods, uncrated, between metropolitan New York on the one hand and all points in continental United States on the other. Applicant proposes to use helicopters and motor vehicles in an integrated service. Charles A. Collins is president and director of the company. (Docket 1426)

Great Plains Airways, Inc.

This company of Amarillo, Texas filed for undesignated points in 32 counties in Texas, four in Oklahoma, one in Kansas and eight in New Mexico with an alternate proposal to serve some 49 designated cities on five routes originating and terminating in Amarillo. The company is capitalized at $100,000 and John R. Fullingim, P. O. Box 1510, Amarillo is president. Braniff Airways has subscribed for 25% of the stock. (Docket 1432)

Harold B. Green

Applicant of 124 N. New Hampshire St., Los Angeles, filed an application for air transportation, by helicopter, of passengers, mail and property over routes from Los Angeles to San Ysidro, from Gilman Hot Springs to Murrieta, from Los Angeles to Cataline Island, from Los Angeles to San Clements and from Los Angeles to San Diego. Applicant proposes to form a $100,000 corporation to be known as the Southern California Helicopter Taxis Inc. (Docket 1428)

Gulf Airlines

This company P. O. 1660, Houston, Tex., has filed for nine air transport routes for carriage of mail, passenger, express and freight between the following points: three routes, via different intermediate points, between Houston and El Paso; Brownsville and El Paso, San Antonio and Brownsville; Houston and Brownsville; Brownsville and Shreveport, La.; Houston and Dallas; Houston and Tulsa. The company consists of three partners—James R. and Malcolm Cravens and Kemp S. Dargan. (Docket 1418)

Ketchikan Air Service

This carrier of Ketchikan, Alaska—a partnership consisting of Howard Beymer, Ben Smith and Stanley Oaksmith, Jr., filed an application for a certificate to engage in nonscheduled or charter service between Ketchikan and cities in the 1st Judicial Division. Applicant stated additional air service is needed in the area to provide transportation for transient workers in the salmon and logging industry. (Docket 1435)

Lone Star Airways, Inc.

Lone Star Airways, Inc., of 1011 Frost Bank Building, San Antonio, Texas, filed for extensive routes in the San Antonio area. If the Board finds it cannot issue the company a flexible type certificate permitting the applicant to serve all points in 43 counties in Texas, then some 36 cities are named for designation in the certificate on four routes originating and terminating in San Antonio. Braniff Airways has subscribed for 25% of the $100,000 of capital stock. H. P. Drought is president of the company. (Docket 1434)

National Air Transportation Co.

This company through its president, R. Y. Millar, of 19925 Hoover Ave., Detroit, asked for a certificate to engage in freight operations between Detroit, Toledo, Cleveland, Buffalo and Detroit and between Detroit, Lansing, Grand Rapids, Muskegon, Milwaukee, Minneapolis, Omaha, Moline, Chicago, South Bend, Kalamazoo and Detroit. Applicant states his company is capitalized at $500,000 and it proposes to operate two round trip schedules daily. The company has under option to purchase one Cessna "Airmaster" with payload capacity of 600 pounds, one twin engine Bennett Model B-1 with payload of 1,000 pounds and three twin engine Curtiss "Condors" with payload of 5,300 pounds. (Docket 1421)

Oklahoma Airways, Inc.

Applicant of Oklahoma City, Okla. filed for extensive routes in the Oklahoma City area. The applicant requests a flexible type of certificate which will enable it to inaugurate or suspend service to all communities in 38 counties in Oklahoma and three counties in Texas. In the event the Board finds it cannot issue such a type certificate, then the applicant names the towns on seven routes originating and terminating in Oklahoma City which should be designated in the certificate. The application was signed by Virgil Browne, president of the company, which is capitalized at $100,000 of which 25% has been subscribed by Braniff Airways, Inc. (Docket 1430)

Oregon Motor Stages

This applicant through R. W. Lemen, its president, filed an application stating that it does not come under the provisions of Section 408 with reference to the question of control. It asked the Board for a certificate to conduct an air transportation service and stated that it proposes to continue at the same time its highway transportation business. (Docket 1413)

Orlando Charter Airline

Thomas E. Gordon, doing business as Orlando Charter Airline, 45 East Washington Street, Orlando, Fla., filed an application for six air transport routes, five of which originate and terminate in Orlando, the six originating and terminating in Jacksonville. Scores of intermediate points are named. The appli-

The canopy is placed over frame and shock-loaded by hydraulic pressure that can reach 18,190 pounds. Pressure applied is recorded on gauges. This permits close range study of weaknesses in the fabric, seams or lines that may occur under abnormal pressures.

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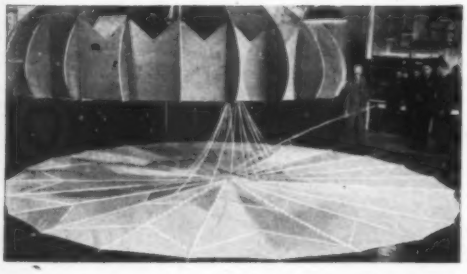

The canopy is spread on the floor. Each suspension line under 20 pounds of radial pressure, permits close check on design, pattern, construction and dimensions of canopy.

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cant states he now owns three 145hp Fairchild 24s—four place, and one 90hp Stinson Voyageur, three place. Applicant proposes to carry mail, passengers and property and will use, in addition to the above listed equipment, new dual engine planes when they are available. (Docket 1415)

Pan American Airways, Inc.

This carrier filed for an exemption order which will authorize it to give service to and from Santiago, Cuba, as an intermediate point between Miami and Buenos Aires and which will permit suspension of the requirement for rendering service to Antilla, Cuba, as an intermediate point. (Docket 1414)

Piedmont Aviation, Inc.

This company of Smith Reynolds Airport, Winston Salem, N. C. filed for nine passenger and airmail pickup routes in Ohio, West Virginia, Virginia, Pennsylvania, North Carolina, South Carolina, Kentucky, Tennessee and Georgia. The company desires to carry passengers, mail and property in conventional planes over certain routes and mail and property on the pickup routes. Thomas H. Davis is president of the company. (Docket 1422)

Southwest Airlines

Applicant of Box 692, Roswell, N. M. filed for five air transport routes which would operate between Roswell and the following terminal points: Phoenix, Ariz., Pecos, Texas, Lubbock, Texas, Las Vegas, N. M. and Amarillo, Texas. Applicant proposes to carry persons, property and mail. The applicant is now an association of Roswell business men who will form a corporation if the certificate is granted. Bert Aston is chairman of the committee. (Docket 1433)

Sterling Moore Clark

Applicant of Pine Bluff, Ark., a commissioned officer in the Marine Corps stationed at Marine Air Station, B.O.Q.F. Rm. 114, Edenton, N. C., filed for five air routes between Pine Bluff and the following terminal and intermediate points: Jackson, Miss., via Greenville, Miss.; Tulsa via Little Rock, Ft. Smith, Ark., and Muskogee, Okla.; Shreveport, via El Dorado, Ark.; Memphis, Tenn., via Helena, Monroe, La., via Monticello, Ark. The applicant states that he owns and operates Clark Field, at Pine Bluff. He requests a certificate to carry mail, passengers and property and proposes to use Beechcraft Model 18S planes. (Docket 1414)

Texas Central Airways, Inc.

This company of 1933 Elm Street, Dallas, Texas, filed for permission to give a feeder type of air service to undesignated cities in 75 counties in the Dallas-Fort Worth area of Texas and five counties in Oklahoma. If the Board denies the applicant this type of a certificate, then as an alternate proposal scores of cities are named on nine routes originating and terminating in Dallas-Fort Worth. B. F. McClain of Dallas is president of the company which is capitalized at $100.000 of which 25% has been subscribed by Braniff Airways, Inc. (Docket 1431)

The Manhattan Storage and Warehouse Co.

Applicant of 801 7th Ave., New York, N. Y., filed for non-scheduled air transportation of household goods between all points and places in Connecticut, New York, New Jersey, Pa., Massachusetts and Rhode Island on the one hand and all points and places in continental U. S. on the other hand. The company proposes to integrate its air transport service with surface transport operations. Applicant proposes to purchase 10 cargo planes and six helicopters in carrying out this service. (Docket 1420)

Walter Air Lines, Inc.

This company of 351-0 43rd Street, Long Island City, New York, filed for two air transport routes for carriage of persons, property and mail between New York and North Adams, Mass., and between New York and Canaan, Conn., via a large number of intermediate points. The applicant proposes to integrate air and surface operations. Peter Fessia is president of the company. (Docket 1425)

West Central Airlines, Inc.

Applicant of 4716 Harley Avenue, Fort Worth, Texas has filed an application for a feeder line system for air transportation of persons, property and mail over seven routes in Texas, Oklahoma, Kansas, Nebraska, South Dakota and North Dakota. The routes are laid out to feed Braniff, Continental, TWA, United, Eastern, American, Inland and Northwest airlines. Robert G. Wemple, is vice president and general manager of the company. Applicant proposes to use planes which will carry eight passengers. (Docket 1424)

Western Air Lines, Inc.

This carrier filed three applications for new and amended air routes. In one application, Western asked a route for air transport of persons, property and mail between terminal points, San Francisco and Butte, Mont., via Oakland, Sacramento, Reno and Boise. (Docket 1410). Another route sought is between Las Vegas and San Francisco (Docket 1411) and a third application asked an amendment to the carrier's certificate for Route 19 so as to include Logan, Utah, as an intermediate point. (Docket 1412)

Recent CAB Orders Affecting Air Carriers

2747, Doc. 570 et al: Granted Delta petition to exclude Docket 1180 from consolidated proceeding; denied National's petition to consolidate its Docket 1108 in its entirety in this proceeding; denied Virginia Central petition to consolidate additional routes in the proceeding; consolidated Seaboard Airways, Inc. Docket 1269 and Colonial's Docket 1276 with consolidated proceeding.

2748, Doc. 570 et al: Granted Greyhound Corp., Department of Justice and certain cities permission to intervene.

2749, Doc. 609 et al: Granted Blue Ridge Lines, Inc., permission to intervene.

2858: Granted permission to Pan American Airways to serve Montevideo through Melilla Field.

2862, Doc. 1006: Approved acquisition of control and purchase of assets of Inland Air Lines by Western Air Lines.

2867, Doc. 779: Found that Sec. 401(h) does not authorize the Board to compel Panagra to extend its operations from Canal Zone to U. S. port of entry. Dismissed application.

2868, Doc. 1345 and 1346: Consolidated for hearing applications of American Export Air Lines and American Airlines on divestment and acquisition issues. Granted TWA, United, Pan American and Air Line Pilots Association permission to intervene.

2869, Doc. 733: Dismissed application of Western Air Lines for local-feeder service in California on petition of applicant.

2871: Permitted TWA to inaugurate of nonstop service between Albuquerque, N. M. and Phoenix, Ariz. on Route 2.

2870, Doc. 756: Partially rescinded service suspension order so as to authorize resumption of service at Yakima, Wash.

2872, Doc. 1003: Dismissed application for air transport routes of Air Transport Corporation on request of applicant.

2879, Doc. 915: Rescinded suspension order of Bristol Bay Air Service.

2880, Doc. 570 et al: Dismissed application of Seaboard Airways, Inc., in Docket 1269 at applicant's request.

2881: Dismissed Eastern's application in Docket 488 at applicant's request.

Most significant contribution to safer take-offs and landings was the development by Douglas of the tricycle landing gear and its use on large aircraft. Thus were the hazards of ground loops and noseovers eliminated.

Adapted to the Douglas Dolphin in 1936, the tricycle gear was next used on the mammoth B-19, the DB-7 Boston, the A-20 Havoc, the DC-4 and the C-54 transports.

Altho an independent development by Douglas, full engineering data on tricycle gears was available to other manufacturers, resulting in safer take-off and landing characteristics for many planes.

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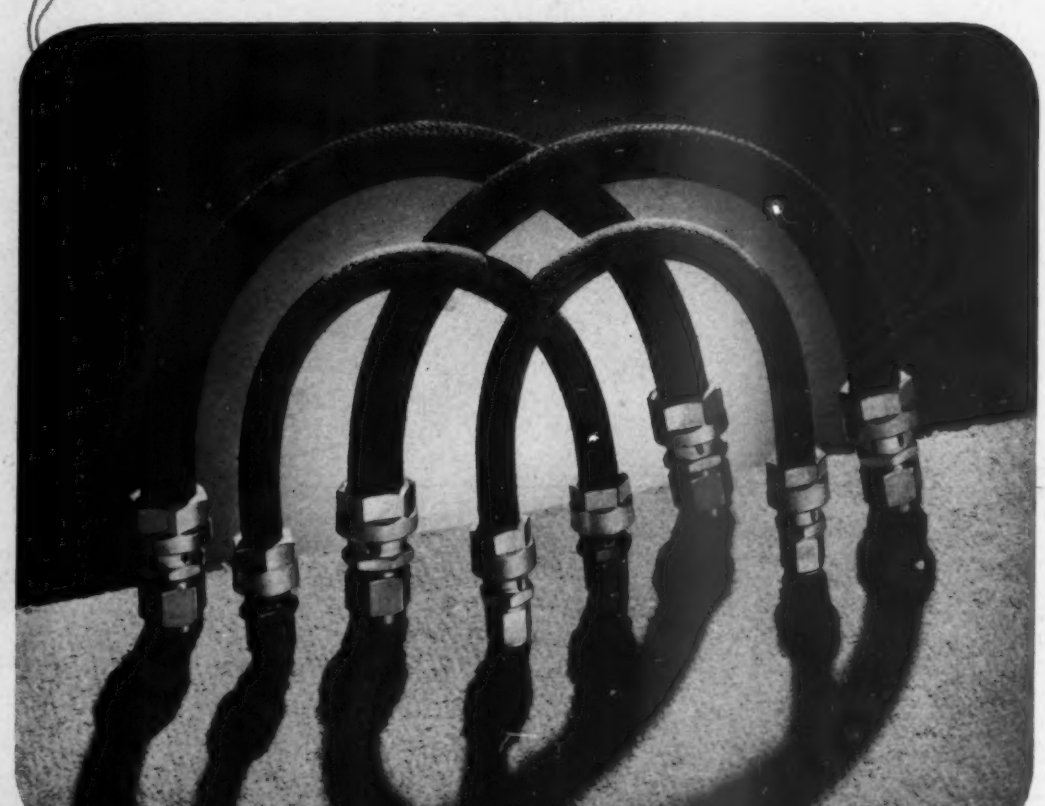
AIRCRAFT

DOUGLAS EQUIPPED AIRLINES: American Airlines — Hawaiian Airlines Ltd. — Braniff Airways — Chicago & Southern Air Lines — Colonial Airlines — Delta Air Lines — Eastern Air Lines — Western Air Lines — Northeast Airlines — Northwest Airlines — Pan American Airways — Pennsylvania-Central Airlines — TWA — United Air Lines — China National Airways — Pan American-Grace Airways — Aviance (Aerovias Nacionales de Colombia) — Cia. Mexicana de Aviacion — Panair Do Brazil — Cia. Nacional Cubana de Aviacion, S.A. — Uraba, Medellin and Central Airways — Cruzeiro do Sul (Brazil) — Primeras Lineas Uruguayas de Navegacion Aerea, S. A. — Aerovias de Guatemala, S. A. — Canadian Pacific Airlines — Australian National Airlines — Royal Dutch Airlines (K.L.M.) — Royal Netherlands Indies Airways (K.N.I.L.M.) — Sabena (Belgian Congo) — Swissair (Switzerland) — A.B. Aerotransport (Sweden) — Indian National Airways — L. A. P. E. (Spain) — Aer Lingus (Ireland) — American Airlines of Mexico — British Overseas Airways (BOAC) (England).

Life lines OF MACHINES AND MEN!

This is a good picture of four strands of FLEXIBLE HOSE—but no picture at all of their dramatic part in modern warfare. It would take moving pictures to tell *that* story! You'd see water, fuel and oil rushing through them at the height of battle . . . in planes, tanks, ships and combat cars in every sphere of combat.

Truly the wartime function of simple flexible hosing is equalled only by its peacetime potentialities. As the world's largest manufacturers of this product, the four plants of The Weatherhead Company have played a prominent part in the nation's war effort—and are prepared to assume the same role in Peace.



Look Ahead with

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Manufacturers of vital parts for the automotive, aviation, refrigeration and other key industries.

Plants: Cleveland, Columbia City, Ind., Los Angeles
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FREE: *Write on company letterhead for "Seeds Of Industry"—a history of The Weatherhead Company, its many facilities and diversified products.*

Airline Personnel

Thomas

Moore

England

Smith

MacDonald

Bash

Executive

George P. Smith, sales manager of Compania de Aviacion Pan American Argentina, S. A., has been named general manager of the company, replacing **Sylvester J. Roll,** who has been called back to the United States to become assistant to the vice-president of Pan American Airways.

Financial

Alton MacDonald, formerly assistant to the treasurer of National Airlines, has been elected treasurer.

Erle M. Constable has been named assistant treasurer of TACA Airways, S. A., and TACA Airways Agency. Formerly of Transcontinental and Western Air, Constable was loaned to TACA shortly after TWA purchased an interest in the company to make a survey of accounting procedures in Central America.

Traffic

R. W. Baker, assistant manager of reservations and ticket offices in American Airlines' Eastern division, has been named Eastern superintendent of reservations and ticket offices. He will trade positions with **Roger F. Burkhardt.** American also reports that **D. L. Urquhart,** superintendent of reservations and ticket offices in Washington, has been appointed traffic manager at AA's new station in San Antonio. He will be succeeded by **William F. Prigge,** who was formerly traffic representative in Washington. **Henry O'Neill, III,** formerly reservations manager at the Washington National Airport, is the new AA traffic representative in Washington. **James Webster,** formerly assistant reservations manager in the capital, has been named reservations manager.

Prevost

Constable

Ivan Bullot has been appointed by Pan American Airways to supervise a new passenger sales promotion program.

Alex Reid, DTM for Northwest Airlines at Spokane, has been named assistant traffic manager at Chicago. He will be succeeded at Spokane by **W. Robert England,** office manager and traffic representative at Seattle.

Thomas A. Prevost, formerly DTM for National Airlines at New Orleans, has been promoted to Eastern regional traffic manager with headquarters in New York.

Operations

William B. Moore has been named operations manager of All American Aviation and will have charge of all Air Pick-up operations. **T. Foster Thomas, II,** has been appointed operations manager of AAA's Military Cargo Division.

Miscellaneous

D. G. Bash, treasurer of National Airlines since 1937, has been appointed Director of Research and Development.

EAL Opens Tampa-Miami Run

Eastern Air Lines has inaugurated service between Tampa and Miami, Fla., as an extension of the New York-Tampa route. The "Tampa-Miami Flyer" leaves New York at 8:30 A.M. daily, arrives in Tampa at 6:34 P.M., and Miami at 8:13 P. M. The north-bound "Miami-Tampa Flyer" leaves Miami at 7:50 P.M., arrives in Tampa at 9:18 P.M., and in New York at 6:59 A. M.

PCA President Honored

C. Bedell Monro, president of Pennsylvania-Central Airlines was awarded the honorary degree of Doctor of Laws at the annual commencement of Marietta College last month. The award was "in recognition of Monro's many contributions to the development of and progress of commercial air transportation."

The lady asked for a punch in the nose

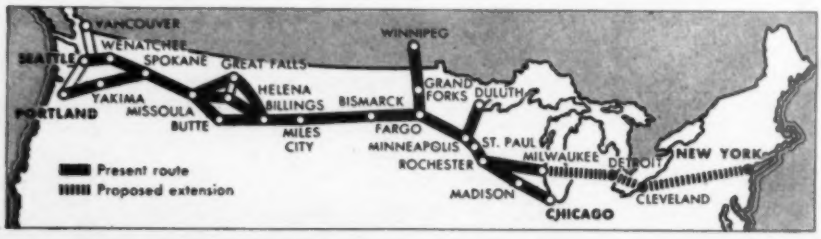
The boys she carried up in front said it was like being in a gold fish bowl. Especially when a Zero weaved in, with all guns spitting—and you had nothing but one pipsqueak 30 calibre to talk back with.

That's how it was, early in the war. Easy enough to say, install more firepower. But how?

Until plane makers could adjust their production lines, nose guns became a job for Bomber Modification. At the Army Air Force's big plant in St. Paul, we pulled out the 30 calibre and put in three 50's. We gave the guns more swing, sideways and up-and-down, to catch the fellow who tried to sneak in at an angle, or from below. The first installations were sweated out of metals and plastics by hand, with the need of haste as our only blueprint. By the time heavily armed nose turrets could be built in at the factory, we had added that extra punch to nearly a thousand Liberators.

That's one goal of Northwest Airlines' Bomber Modification project—to install improvements at once and to get 'em to the front quick! Or it's to equip a ship for the arctic or the tropics—or the stratosphere.

The men and tools to shoulder this vital responsibility are the fruit of Northwest Airlines' 18-year experience in commercial air transport—flying passengers, mail and express on the short fast route between Chicago and Seattle. What we're learning in war tasks today will be reflected in safer, faster, cheaper air travel in the Air Age of tomorrow.



NORTHWEST AIRLINES

Traffic

COMPANIA CUBANA DE AVIACION, S.A. national airline of Cuba affiliated with ... American, has inaugurated daily service ... Varadero Beach on the regular route betw... Havana and Cienfuegos.

TRANSCONTINENTAL & WESTERN AIR's ... tercontinental Division has flown 15,41... miles in 2¼ years of operation under the ... Transport Command. The crews of the ... continental Division now are flying more th... a million miles a month. President Jack ... declared.

COMMERCIAL AIR TRANSPORTS resu... night flights into Lindberg Field, San Die... June 1. Such operations had been suspend... since early in 1942 when military hazards a... inadequate lighting facilities brought a ban ... CAA. Requirements including obstructi... runway and boundary lights have been me...

PAN AMERICAN WORLD AIRWAYS SYSTE... crews from Dec. 7, 1941, through April 30, 19... completed 7,306 ocean crossings. These flig... include 3,649 ocean crossings for the Air Tra... port Command, 2,866 for the Naval Air Tra... port Service, 746 over civil routes and ... special missions.

PANAIR DO BRASIL, Brazilian affiliate ... Pan American Airways, has opened a ne... route between Asuncion, the capital of Par... guay, and Campo Grande, Brazil. Planes w... stop at Ponta Bora, the border capital of t... new Brazilian federal state of the same na... both northbound and southbound.

PENNSYLVANIA-CENTRAL AIRLINES repo... that the return of several of its DC-3's fro... war duty will enable it to resume its servi... to Chicago and schedule additional flights ... virtually every city in its system effecti... today (June 15). Flint, Mich., is one ci... which will be affected since it is part of th... Detroit to Chicago air lane which serves Gra... Rapids, Flint, Lansing, and Muskegon. No... daily round trips between Washington an... Norfolk, 10 daily round trips between Cle... land and Detroit, an extra round trip betwe... Baltimore, Pittsburgh, Knoxville, Chattanoo... and Birmingham, and one extra non-stop flig... between Washington and Cleveland are amo... new schedule changes.

CHICAGO AND SOUTHERN AIR LINES pla... to use DC-3 just returned from the Army A... Forces to restore its third schedule fro... Memphis to New Orleans, the airline an... nounces. The plane will be put back in... service as Flight 6, returning all C. & S. ... schedules to pre-war levels.

CANADIAN PACIFIC AIR LINES carri... 31,833 passengers during the first four month... of the year, an increase of 75% over last yea... Goods carried declined 11% and mail volu... dropped 27%.

AIR EXPRESS DIVISION of Railway Expr... Agency reports that combination rail-expr... shipments handled for the nation's commer... cial airlines in the first three months of th... year increased 19.6% over the first quart... of 1943.

UNITED AIR LINES' wartime mail loads co... tinue to increase. In April the company fl... 1,231,235 mail ton-miles, a gain of 42% ov... last year. Express ton-miles declined slig... with last month's total 304,407 as against 36... 634 in April, 1943.

AIR MAIL VOLUME in April was 19.2... ahead of April, 1943, but was 3.98% und... March, 1944. The 8-cent postage rate wa... into effect near the end of March, but offici... aren't certain yet if the 3.98% drop w... caused by the higher rate.

OLD METHOD, using grease to lubricate stretching block, was a slow, expensive, dirty job. Here workers apply thick, hard-to-remove grease to stretching block.

NEW METHOD, substituting rubber sheeting for grease, is clean, quick, efficient and a real morale-builder. Another example of how Martin ingenuity boosts war production!

Rubber Sheeting Replaces Grease to Boost Production 50% in Martin METAL-STRETCHING

SUBSTITUTING rubber sheeting for grease on the blocks of stretching machines, Martin has increased by 50% the processing of sheet metal for aircraft "skins." Here's why:

In the Past, stretching blocks were smeared with heavy grease, to provide lubrication as the metal sheets were drawn. This necessitated numerous precautions in handling the slippery, sharp-edged sheets and the metal had to be cleaned first by hand, then in vapor baths, to remove the lubricant. Grease on floors increased hazards, while on employees' clothes or persons it lowered morale.

Today, by use of rubber sheeting instead of grease, these disadvantages are eliminated. The rubber stretches with the metal, making lubrication unnecessary. Cleansing of metal and reclamation of grease are things of the past, the job is clean, and employee morale is high.

As a Result, total departmental output has been increased almost 50% . . . the cost of the grease (more expensive in use than rubber sheeting) has been saved . . . machines and tools do not have to be cleaned after each shift . . . safety hazards have been eliminated . . . more work is being done with fewer people. Quality of work is unimpaired by the change in production methods. This is just another example of how Martin ingenuity, in every department, is saving time and boosting production of warplanes. If aviation is permitted to establish reserves for postwar construction and employment, this same ingenuity will serve peacetime America by speeding delivery and cutting costs on commercial versions of the Martin Mars and other great Martin airliners of tomorrow.

THE GLENN L. MARTIN COMPANY,
BALTIMORE 3, MD.
The Glenn L. Martin-Nebraska Company—Omaha

Martin
AIRCRAFT
Builders of Dependable Aircraft Since 1909

ANOTHER MARTIN FIRST

Father-Son Team

Pan American Airways has a father-and-son team flying the international routes out of Miami. Co-pilot George W. Snow, left, has joined his father, Capt. George D. Snow, senior pilot of PAA's Latin American division, who has 16,000 hours on his flight log.

Pennsylvania-Central Airlines also boasts a father-and-son combination: Pilot Arch Leighton and Co-Pilot Willard Leighton. Arch is a PCA veteran while 21-year-old Willard just recently joined his father in the cockpit. This team may soon be separated for the duration of the war as Uncle Sam has been beckoning Willard for Army service.

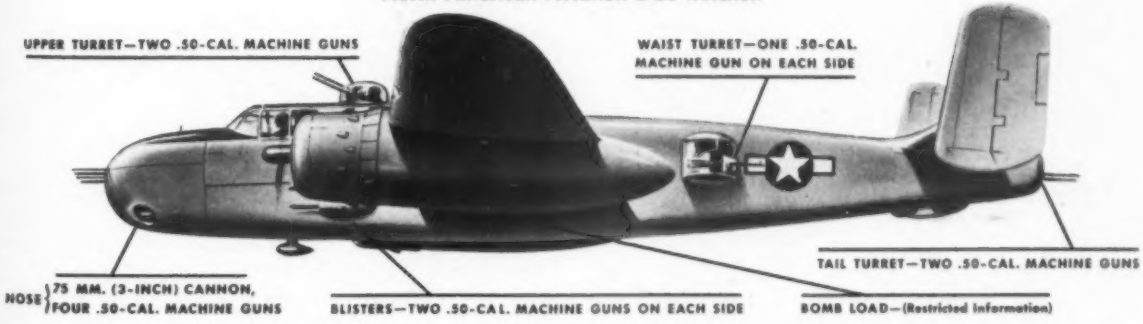
TWA Reports 1st Quarter Net Loss of $92,419

Transcontinental and Western Air reports a net loss of $92,419 for the first quarter of 1944, as compared with a net profit of $357,351 for the same period last year.

"The ratio of increase in operating costs has been higher than the increase in operating revenues," said Jack Frye, president. "Flights have been scheduled with more frequent stops in order to provide the maximum payload. As a result of this scheduling, it has been necessary to staff practically all stations to provide 24-hour service."

Frye said the restricted number of airplanes in operation has resulted in a higher ratio of increase in operating costs than in operating revenues, since in most cases the minimum number of personnel required at a station is sufficient to operate a number of additional airplanes. As additional airplanes are placed in operation, the ratio of increase in operating revenues will exceed the ratio of increase in operating expenses, he predicts.

North American Aviation B-25 Mitchell



WHERE THERE'S A FIGHT THERE'S A MITCHELL! On every front the crushing firepower and bomb-load of the cannon-packing Mitchells are saving the lives of American soldiers.

North American Aviation *Sets the Pace*

WE MAKE PLANES THAT MAKE HEADLINES...*the B-25 Mitchell bomber, AT-6 Texan combat trainer, P-51 Mustang fighter (A-36 fighter-bomber), and the B-24 Liberator bomber. North American Aviation, Inc. Member Aircraft War Production Council, Inc.*

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AIR · VACUUM · HYDRAULIC · ELECTRIC

TODAY, AAC Engineered Power Controls are serving the United Nations in their victorious war effort, as standard equipment on such famous aircraft as the Liberator, Lightning, Vega PV-2, Constellation, Catalina, and others. Important new aircraft, now in the making, also will be equipped with hydraulic controls engineered and produced by AAC.

TOMORROW, AAC Engineered Power Controls will be ready to serve a world at peace, not only in the air but on the land and sea, as well. The facilities and know-how that have made us a leading supplier of high precision controls for aircraft, already are at work in developing new and improved controls for commercial motor vehicles, Diesel engines, marine craft, industrial machinery and equipment. *Look to AAC for a solution of your own power controls problems, now and after the war.*

POWER CONTROLS DIVISION

Burbank, Calif.

(P-44)

LAND

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International Air Policy Terms Discussed

Unlimited "Freedom of the Air" Described as Destructive, Impracticable Concept Not Worthy of Consideration

By E. J. FOLEY

ALONG WITH THE OTHER major powers, the United States is setting the stage for the postwar international air transport drama. New significant terms are going into the scenario. All elements of American aviation will require a working knowledge of these terms to permit their proper active participation in resolving the important issues.

Foley

What follows is simply an exposition of some of these terms and our evaluation of their importance. The present contest between agencies desirous of providing international air transportation for the United States has no bearing on this discussion. It is a distinct and far more complicated issue which will be decided on its own merits.

"Freedom of the Air" is a catchphrase of undeserved popularity. Its widespread use presumably is due to its encouraging, if erroneous, connotation of an atmosphere necessary to the full free development of peaceful air commerce. Literally defined, "Freedom of the Air" means that any transport aircraft of any nation can operate and do business anywhere in the world. Compare this promiscuity with "Freedom of the Seas" and you will see the distinct disadvantageous difference which is too often overlooked. Under a policy of "Freedom of the Seas" a nation allows the vessels of another nation to come to its front door; under unrestricted "Freedom of the Air", a nation must permit the craft of any other nation access to the front room, the ice box etc. This homely difference is ample evidence of the dangers of Freedom of the Air to nations generally and of the practical impossibility of its being acceptable to the world's powers.

Sugar-Coated Words

The fact that, to our knowledge, no nation of the world has ever accepted such uncontrollable "Freedom" either in theory or in practice, is not a guarantee that no nation will accept it in the future. There are certain small, strategically located foreign nations which might gain from such a policy since they have nothing to lose by accepting.

Generally, it would seem that the international air transport scene would be clarified if the term "Freedom of the Air" were dispensed with entirely. At least, it is a dangerous and impractical theory sugar-coated in deceptively pleasant words.

Sovereignty of the Air is obviously the opposite. It provides that each nation has full jurisdiction of the air above its territory and territorial waters and has complete discretion as to the admission or non-admission of any aircraft in the air space under its sovereignty. This principle is the sound foundation upon which all past international air transport activity has been built and its realism and practicability probably destines it to be the basis for future developments.

It does not preclude the full and necessary development of world air commerce but rather it gives to each nation the appropriate "tools" to control foreign international air transport in the interests of peaceful trade, security, etc.

May Relax Sovereignty

Starting with the acceptable premise of "sovereignty", the nations of the world may elect to relax this sovereignty collectively in the interest of providing *operational accessibility*, which is *entirely distinct* from the promiscuous commercial accessibility of "Freedom of the Air." It is this interest which generates the synonymous terms "Freedom of Innocent Passage for Commercial Air Transportation" and "Freedom of Transit in Peaceful Flight."

This "Freedom" which must be recognized as a limited relaxation of sovereignty is (1) the privilege for aircraft in commercial transport service to fly *through* the air space above foreign territory and territorial waters over which a nation has full jurisdiction and (2) the privilege for such aircraft to land on foreign territory for refueling, repairs or other operational requirements.

We should note that no commercial privileges whatsoever are embraced by this Freedom. Since all nations will, in general, be affected alike, let us examine the significance of these two privileges to the United States.

The permission to fly over sovereign foreign territory gives to United States international air transportation, *operating access* to inland foreign nations and to those coastal foreign nations which are accessible from the United States only at the cost of extensive detours around island masses or other coastal countries intervening if Freedom of Transit is not permitted. Such ingress is obviously necessary to the full development of our world air commerce. Consider the reciprocal significance of this privilege to those inland foreign countries themselves. Through it, they obtain egress to the air space beyond the immediately adjacent nations.

An air map of the world shows the comparatively small land area of the United States and the scarcity of United States possessions. The revelation of these facts serves to heighten the importance of these privileges to our nation's international air transport.

The second privilege, permitting landings on foreign territory for refueling, repairs or other operational requirements, is equal in importance to the first and has a threefold significance.

First, it allows the commercial advantage of maximum payload capacity through the employment of appropriately spaced operating stops. It has been contended by some that this privilege is made unnecessary by the long-range high speed transport aircraft already available. However, to our knowledge no aircraft of the near future offers the worldwide range which need not sacrifice payload for fuel. Whether such sacrifices are consistent with the requirements of public convenience and necessity is surely not for us to debate.

Secondly, the privilege of landing on any foreign territory enhances the safety of international air transport operation. The availability of so extensive a system of landing sites in the event of operational requirements is definitely conducive to that conservatism of operation which should typify international air transport.

Finally, these operating stops improve reliability of operation. Frequently, the use of alternate series of operating stops makes it possible to route flights around such obstacles as wind and weather.

A becoming limitation has been appended to the definition of "freedom of transit" in all current discussions. It is that this privilege shall not be granted to all nations but rather, only to those friendly powers which enjoy the confidence of a peaceful world.

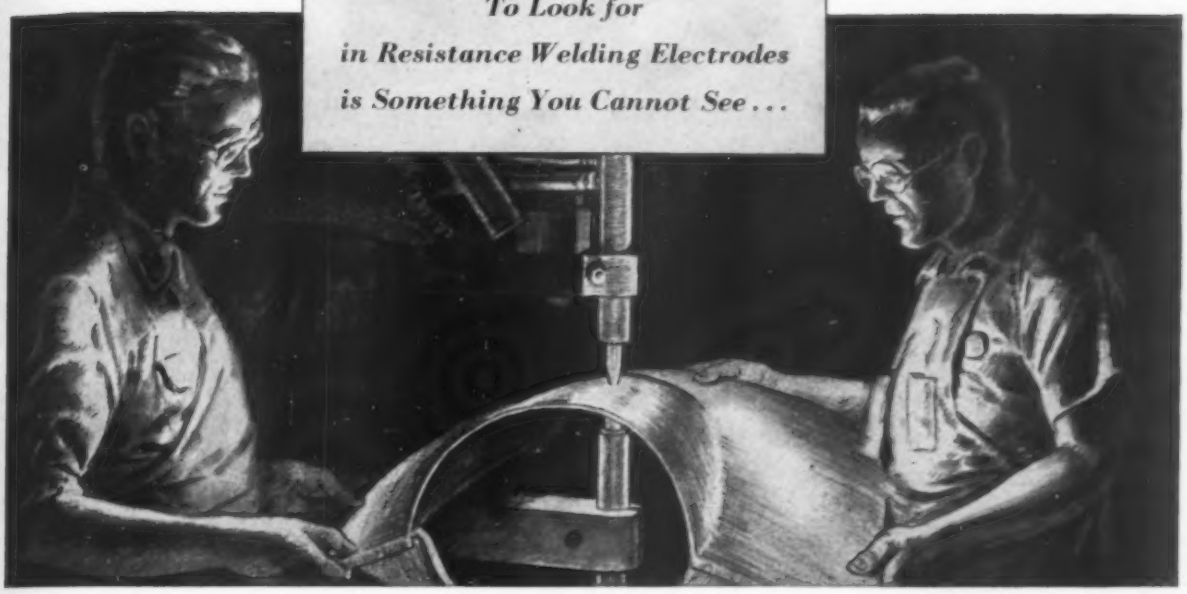
'Commercial Outlet' Defined

Following the provision for *flying entry* to foreign nations is the permission to do business. This has been designated as the granting of commercial outlets. An accepted definition of "commercial outlet" is: the privilege granted by one nation to the aircraft of other nations to operate to and from a designated point or points within its territory, picking up and discharging international passengers, cargo and mail, subject to applicable rules and regulations.

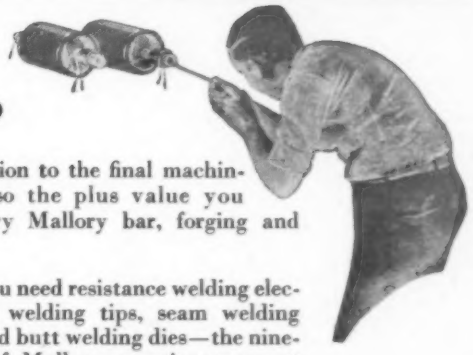
Since this point is so obviously the crux of the international air transport drama, it is unnecessary to comment on it in detail.

The two points immediately above, "Freedom of Transit" and "commercial outlets," have one thing in common: they are both matters for negotiation between the two or more parties concerned. The proponents of the policy of "freedom of transit" are hopeful and insistent upon its worldwide acceptance. Their point is well taken; for to accomplish the purpose

The Most Important Thing
To Look for
in Resistance Welding Electrodes
is Something You Cannot See . . .



Mallory Metallurgical Knowledge . . . Behind the Faster, Better Welding Job



Speed—without loss of quality—is the watchword of every war plant. Mallory sets the pace with dependable, long-life resistance welding electrodes that produce better welds in fewer man hours.

Standard Mallory electrodes save the costly delays formerly involved in producing special tips. Mallory alloys—Elkaloy*A, Mallory 3* Metal, Elkonite*—greatly reduce "down time" for redressing and replacement.

Back of this combination of speed and excellence lies Mallory metallurgical knowledge. It extends through every step of electrode production, from the exact proportioning of the composition to the final machining. It is also the plus value you get in every Mallory bar, forging and casting.

Whenever you need resistance welding electrodes—spot welding tips, seam welding rolls, flash and butt welding dies—the nineteen years of Mallory experience are at your service. Mallory experience can help you determine the right size and contour of electrode for the job, and the type of alloy best suited for its requirements. It can lead, as it has frequently led before, to stronger, lighter, more easily fabricated products at lower cost.

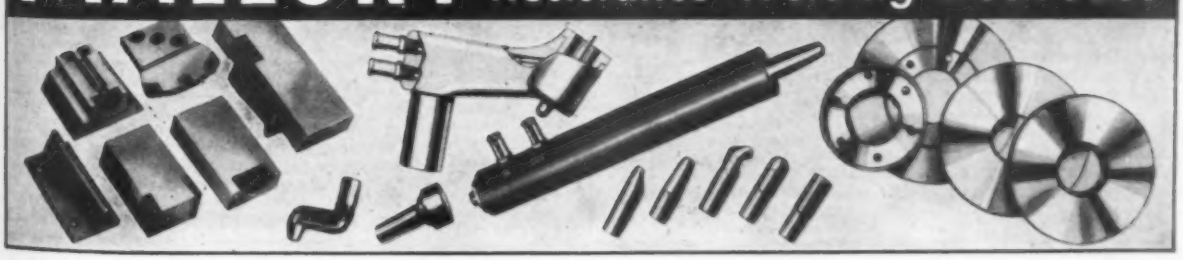
P. R. MALLORY & CO., Inc., INDIANAPOLIS 6, INDIANA

Invest in Victory —Buy More War Bonds

*Reg. U. S. Pat. Off. for metal compositions

P. R. MALLORY & CO. Inc

MALLORY *Standardized Resistance Welding Electrodes*



such general agreement would seem necessary. On the other hand, commercial outlets seem more properly the subject for consideration by two nations.

Since such negotiations are and will continue to be a major factor in our international air transport program, the position of our government as to *who* shall carry out such negotiations has a direct bearing on our understanding of the issues Last year, the CAB and the Department of State released a joint expression to the effect that such negotiations were the responsibility of government and that the carrier need only concern himself with the proof of fitness and ability and a showing of public convenience and necessity. This stand is entirely sound when we consider that such negotiations involve, in every instance, a concession on the part of a sovereign state. Surely, such concessions cannot be interpreted as "private business deals." They are an important segment of a power's international relations and by reason of the fact that they are only a *segment*, it becomes even more important that they be intergovernmental.

Public Awareness Growing

The public awareness of the implications of postwar international air transportation is growing daily. In the light of this snowballing attention, it would seem essential that the entire aviation industry of the nation, which has a distinct stake in this future, should become thoroughly conversant with the ramifications of the subject. Our space has permitted only the most superficial treatment of three or four of the fundamental terms. We have not even mentionel such points as cabotage, the suggested analogy between international air transport and international communications, technical regulation, etc., etc.

It is our hope that what little we have been able to do here will provoke thought and discussion and curiosity. If your interest justifies, we shall be glad to take another whirl at the subject in an attempt simply to expose some of the thinking. We repeat that in these columns, we take no sides on the subject but simply present the material as we see it. If you would be interested in thoroughly exploring the subject, we recommend Lissitzyn's book, "International Air Transport and National Policy" and Bill Burden's "The Struggle for Airways in Latin America". Both are excellent in our opinion.

New Martin Process

A new process evolved by Louis Barrett, a Glen L. Martin Co. engineer, is enabling the company to repair a large percentage of the aluminum turret castings that previously were rejected because of porosity and hollow spots. The porous material is now being replaced with welding metal. Under the new process, the surface defects in the casting are first removed by grinding or chipping out the porous material. The casting is then preheated to between 200 and 300 degrees F. either in a furnace or by application of local heat. The cavity is then filled with weld metal using a carbon arc and a five per cent silicon 'Aluminum Weld' welding rod. Finally the welds are cleaned and filed smooth, and the weld area is neutralized.

Letters Give Tips for Designing Airports

An article by E. J. Foley in the April 15 issue of *American Aviation* on "Builders Urged to Study Airport Design" struck an interesting note among airport officials. Included in the response are two particularly illuminating letters on the subject.

The letters follow:

1 *American Aviation*, April 15 issue, carries a story over your byline entitled, "Builders Urged to Study Airport Design." Fundamentally, the story is excellent, as are most of the stories under your byline in this magazine. However, this particular one, having to do with airports, attracted my attention and I read it very carefully.

You have said and rightly, "The first problem in airport design, and the simplest, is the development of a family of runway patterns." What you failed to mention in your story, concerning the Administration Building is its *location*.

The type of runway layout is fairly easy to plan as is the question of drainage. The length and composition of runways is well known but the actual location of the Administration Building Group with respect to the airport is so important from a revenue standpoint and so little is known about it that it could be made the subject of an article by you, which should prove of considerable interest and be enlightening in view of the present rather dubious economic health of the majority of airports throughout the United States.

It is fairly simple for a city to hire an engineer to lay out an air transport terminal; likewise, it is simple for the city to hire an architect to design the Administration Building Group for this airport, but the location of that selfsame Administration Building Group will oftentimes determine the difference between that airport making money and showing a profit on the sometimes terrific investment in the said airport, or of losing money year after year.

Then too, the question of other sources of revenue must be considered and the architect knows practically nothing about this. He probably wouldn't design a place where a gift shop could be located unless he was in close collaboration with a modern, merchandising airport manager who foresaw the possibility of those things. He probably wouldn't think of providing a location for a barber shop, a bank, a drug store or a women's and men's sports wear shop, together with many other potential sources of revenue.

In many terminals, there is no opportunity for the location of a service station to serve the patrons of the airport as well as the employes, with gasoline for their cars, nor would there be any place for a large garage in which these same people might keep their cars inside and who also might want them worked on—greased, front wheels straightened, tuned up, fenders repaired, a paint job, a wash or polish job. All of these things are being done in a garage and service station here at this Terminal. Likewise, we have parking lots into which the person who drives to the terminal can park his car within 150 feet of the entrance to the Administration Building. Those who work on the terminal can park a little farther away for a nominal sum per month.

J. E. Dolena, an architect, whose address is 322 North Camden Dr., Beverly Hills, Cal., has been collaborating with me for four years on the design of Administration Building Groups. It was he who drew the plans for the alterations on our Administration Building, which, while far from being perfect, still does a fairly creditable job. He has some outstanding designs, one in particular for an Administration Building Group which embodies the ideas heretofore expressed in this letter, along with some others, which, if it fell to my lot, I would incorporate in any new air transport terminal layout.

DUDLEY M. STEELE, Airport Manager,
Lockheed Air Terminal, Inc., Burbank, Cal.

2 Reference is made to your commentary of April 15 entitled. "Builders Urged to Study Airport Design." Because you invite opinions, I submit a summary of my reactions to your presentation.

First, there is a definite need for complete and comprehensive studies of airport problems, not only in regard to design but with respect to operation and maintenance.

Second, the parties concerned in design today are, as you state, qualified, but to a degree.

Third, the airlines which you state are, perhaps, in the best position to offer design and consultation (of which more will be said) should not be expected to carry the burden because they, too, are qualified only to a degree.

I. Now, as to a builder-contractor getting into the field in a large way: A large concern could do it, but the probability, in fact the desirability, is academic. Airports are quite a bit like streets, highways and freeways—they are public affairs, although each airport is still an individual problem to be studied on its own merit. While general rules apply, a builder-contractor to do a good job, would have to retain a rather large staff of established experts.

Too many communities, already possessing reasonably intelligent city engineers or planners, and having the benefit of counsel from the carriers, CAA, and others have been billed out of large sums for airport surveys and plans not worth the paper they are prepared on. This procedure was initiated as early as 1933 and began to develop again in 1939-40. Of late, it is being revived in connection with "postwar" plans for municipalities.

The three prime factors to be considered in planning any airport are: (1) Aeronautical, (2) Economic, and (3) Engineering. No one man, no group of men, now have all the answers. It takes a smart man or a well-informed group to know where to get the answers. You, yourself, state that it adds "up to a frightening discouragement."

A builder-contractor would have to exact fees—still doing that which you suggest, spending $50,000 or $100,000 in the basic study of the overall problems—which would be out of proportion to the value of the finished product. Even so, having developed a formula for application in projects at hand, a research group would have to be maintained. Fees already exacted have shown that private enterprise regards airport planning as a sitting duck—they'll shortly kill off all the game by hastily executed treatises which will not bear the light of future examination.

A trade association might do some of the work—an endowment would probably be better.

II. "The parties concerned" *are not wholly qualified*, you say. Right, but what makes their job complicated and which brings about the unhealthy and dangerous predicaments you fear, is the entrance of *wholly unqualified* individuals or groups into airport planning and designing. I refer you to an article along this line which appeared in Western Construction News, February, 1944 issue:

"Civil engineers, architects, airport managers, and pilots are not qualified as individuals to answer all of the questions. Their collective response will answer many but we still must consult planners cargo handlers, traffic controllers, technicians responsible for the installation of radio aids along the airways and at airports, safety experts and others . . .

"If you chance upon a Merlin who claims to have the know-how in all phases, count your change, lock the safe and make him prove it."

You would be surprised how many airport "experts" are on the loose today, who are not grounded in fundamentals, whose sole claims to knowledge are ridiculously weak.

It is not possible for public agencies, city, state, or federal, to garner all the facts. Prejudices, politics, red tape, and the singular idea that a public official should never be paid

Pan American DC-3. Time required for maintenance must be kept at a minimum for all ships.

Pan American hangar at Miami. From twelve to eighteen planes are serviced here daily.

Photos courtesy of Pan American World Airways

WHITING HANDLING EQUIPMENT AT WORK—

at Pan American World Airways

Whiting wing jacks are used in servicing Clippers and many other planes in the Pan American World Airways hangar at Miami, Florida. For understanding cooperation in the solution of your handling, loading, or maintenance problems, consult Whiting Collateral Engineering Service. Whiting engineers offer you the benefit of over half a century of experience in the development of specialized equipment for the industry.

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• AVIATION DIVISION •

THE FORMULA OUR ENEMIES FORGOT

Brainpower plus Manpower multiplied by Machinepower equal VICTORY. A simple American fighting formula that our enemies forgot!

Conforming to this formula, Doak Aircraft is a closely knit, hard-hitting manufacturing organization that is pouring vital aircraft parts and subassemblies into the cauldron of war. The resulting brew is sure poison for the Axis.

Come postwar and the same formula at Doak will be applied to peace. Brainpower plus Manpower multiplied by Machinepower can and must contribute to the abundance that will make the peace work.

So, after victory let's profit by our enemies' mistake and not forget the formula that makes our nation great.

DOAK AIRCRAFT COMPANY, INC.

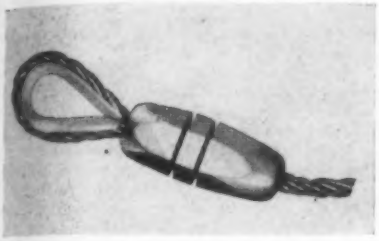
TORRANCE, CALIFORNIA

WORKING AROUND THE CLOCK FOR A BRAVE NEW WORLD

Equipment News

'Safe-Line' Clamp

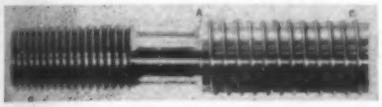
The Safe-Line Clamp Division, National Production Company, 4561 St. Jean Avenue, Detroit 13, Michigan, is the manufacturer of this patented Safe-Line Clamp. Particular features of the item are the inside grooving to fit the



rope and the simplicity of construction which requires no special tools, it is said. The manufacturer has recently added four new sizes to the line, and clamps are now available in 13 sizes, ranging from 1/16" to ¾".

New Thread Design

The Dardelet Threadlock Corporation is presenting this new thread design based on the American National thread, incorporating the Dardelet thread principle. This thread design



takes the interference at the root of the screw thread and flows the metal into the voids at the flanks, thus placing all contacting metal under initial pressure due to cold working of the surfaces. As a result, it is said, the entire thread engagement is sealed against fretting and fatigue life is improved. For assembly, the important dimension is the reamed hole, which is held to plus or minus .0005". Lead areas are not important and any standard tap is satisfactory. The threads on this screw can be chased, rolled or ground. Gaging is done by the ordinary method. Bureau of Standard tests have shown that the design offers approximately 25% of the resistance to the flow of electric current as the A. N. thread.

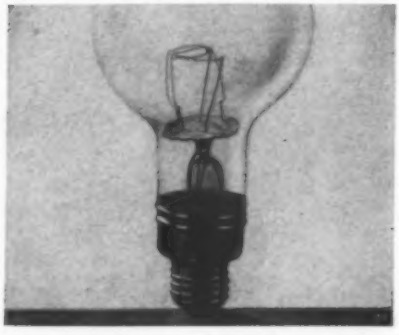
'Striatube' Insulation Tubing

"Striatube" is the trade name for this electrical insulation tubing embodying color identification lines as an integral and permanent part of the extrusion. Made from Lumarith, Striatube is a product of Carter Products Corp., 6921 Carneigie Ave., Cleveland, O. The material is said to have unusual dielectric strength, excellent non-oxydizing properties, high resistance to acids, alkalies, oils and greases and to be impervious to aging or light

exposure. It is available in transparent or opaque tubing, flexible or rigid and in varying sizes, lengths and thicknesses. Lumarith is a product of the Celanese Celluloid Corporation, 180 Madison Ave., New York City.

Locking Base

The Birdseye Division of Wabash Appliance Corp. of Brooklyn, New York, announces this new Superlock construction for permanently locking base and bulb of infra-red heat lamp against the terrific temperatures of tunnel use. This construction uses no cement or strap, but includes a base lining made with special



protrusions which fit tightly into indentations in the neck of the bulb and are locked in position by special crimping of the base. The manufacturer claims the result is a permanently sealed, locked base impervious to heat.

Letters to Foley

(Continued from page 74)

a salary commensurate with the same relative position in private endeavor, all point to outside establishments doing the leg work.

Again, we come to a trade association or an endowment.

III. You suggest that the airlines appear to be in the best position to offer aid. I disagree on several grounds, but I point to two opposed practices used by the airlines which disqualify them as "spearheads". They have been pretty free with the other fellow's money and have not hesitated to ask for improvements useful primarily or solely to them, OR they have been suspicious that they may have to pay through increased rentals, agreements or taxes, for some of the ideas advanced by them, whereupon they have talked down certain developments to the detriment of other aeronautical activity. There are other points including their inability to agree among themselves on lighting, runway lengths, taxiway and apron locations, uniform aircraft loading methods and kindred details.

Granting then, that private enterprise can be of inestimable value in aiding communities *provided* it has an unbiased source of basic material assembled from all phases of aviation and related fields, cannot some representative group sponsor an "Airport Advisory Institute" which can disseminate information?

Could not the ATA, ALPA, AOPA, NAA, ASCE, SAE, Associated General Contractors, American Roadbuilders and similar interested organizations participate in a program which would give your builder-contractor, the community which he would serve, the state and federal agencies involved and old John Q. Public, some indication of the validity of the proceedings? Let them assemble a staff of nonpartisan experts in the respective fields who can report on trends, develop new ideas, analyze and report on other new thoughts and carry the lantern into the unknown.

(Name withheld by request.)

No More Cutbacks in 1944, C. E. Wilson Tells Industry

Output of Some Planes Drops But Others Increase

FEARS THAT SEVERAL cutbacks in aircraft production announced during the last fortnight were the beginning of a new trend have been allayed by Aircraft Production Board Chairman C. E. Wilson. "The only cutbacks in aircraft contemplated for 1944 already have been announced, those at Brewster, Douglas and Bell," he stated.

Wilson explained that production of A-20 attack bombers at the Douglas Santa Monica plant was being gradually reduced between now and September, allowing the company to prepare for increased output of C-54 cargo planes. Production of the P-63 at Bell Aircraft's Buffalo plant will continue indefinitely, but at a reduced rate sufficient to satisfy present needs. Demand for the A-20, which is largely produced for Russia, will be met completely by September, he revealed.

Discounting reports that Willow Run would take over all production of the B-24, he stated that North American at Dallas is scheduled to continue production of the Liberator at the present rate indefinitely. However, the Douglas plant at Tulsa is scheduled to drop production of B-24s to make its own light bomber and Consolidated Vultee plants at Fort Worth and San Diego will discontinue B-24s to produce another model of bomber.

Shortly after Wilson made his statement, Donald Douglas, president of Douglas Aircraft Co., informed Santa Monica workers that new contracts, involving 600% expansion of production on the C-54, are ready for signature. As rapidly as tooling is completed and A-20 area becomes available, transports will begin moving down the new C-54 production line in space previously devoted to attack bombers," Frederic W. Conant, vice president for manufacturing, said.

Original Douglas statements that the cutback in A-20 production would release about 8000 workers has been corrected, with latest estimates bringing the number no higher than 2500. Turnover, quits and transfer of employes to the C-54 program or to jobs in other company plants are expected to account for the majority. Company officials now say adjustments incidental to gradual termination by September and introduction of expanded C-54 production make it possible to avoid mass lay-offs at any time.

The number of workers released is further cut by the number of spares which must continue to be produced to maintain the 5000 A-20s which Douglas has delivered to the Armed Forces and through Lend-Lease to Russia, Britain and other Allies.

Prison Labor Trained

Aircraft plants are being supplied with workers who have been trained in prison and released on completion of their training courses, War Manpower Commissioner McNutt announced. New York, California, North Carolina and Ohio lead in the training of prisoners in their state institutions. Approximately 3,300 men and women have trained in federal prisons in short courses which fit them for jobs. They work at prevailing rates of pay.

Russians Tour Douglas Plant

Members of the USSR Purchasing Commission recently visited Douglas Aircraft Company's plant at Santa Monica, Calif. In the group were Col. V. I. Bakhtin, Col. A. V. Danilin, and Capt. I. P. Lebedev, all of the Red Army Air Forces.

N-K's 100,000th Prop

Among those witnessing the installation of Nash-Kelvinator's 100,000th propeller on a Ford-built Consolidated B-24 Liberator bomber were, left to right—Campbell Wood, general manager, Propeller Division, Nash-Kelvinator; R. A. De Vlieg, N-K's vice president in charge of production; and Col. Harley S. Jones, resident military representative of the Army Air Forces at Willow Run.

Nash-Kelvinator Corp. has built more than 100,000 Hamilton Standard three-bladed hydromatic propellers, it was revealed last month by R. A. DeVlieg, vice-president of the company on the occasion of the installation of the record-breaking 100,000th propeller on a Liberator bomber at Willow Run.

Although N-K's production of propellers was known to be large, this is the first statement of production figures to be approved by military censors. The record was established in less than 26 months of assembly-line production in four of the company's Michigan plants. In addition, Nash-Kelvinator has built "tens of thousands of spare blades and other replacement parts," De Vlieg said.

Seventeen Banks Underwrite Fund for Douglas Use

Seventeen leading banks have underwritten a $75,000,000 revolving fund for use of Douglas Aircraft Company, according to announcement by Ralph V. Hunt, vice-president-comptroller, in Los Angeles.

The credit commitment is for three years beginning June 1, 1944, and places a source of working capital at disposal of the company when and as needed in current and postwar activities. Differing from usual V-loan arrangements, Douglas credit involves no government guarantees and is made directly with the company by the banks. Use of government advances is retained by the company under the new agreement.

The agreement carries an interest rate of 2½ per cent per annum on funds actually borrowed and a commitment fee of ½ of 1 per cent per annum on the unborrowed portion of the commitment.

National City Bank of New York will be manager for the lending group and the Security First National Bank of Los Angeles the agent. Leading banks in New York, Chicago, Tulsa and Oklahoma City, Los Angeles and San Francisco are participating in the financing.

The company has agreed to maintain a minimum net working capital of $25,000,000. Current borrowings under the agreement will total only $6,000,000.

Kaiser Confirms Added Projects With Hughes

Any announcements on aircraft projects in which Henry J. Kaiser and Howard Hughes are jointly interested will come from Hughes, Kaiser declared during an interview with *American Aviation* in Los Angeles.

In confirming reports that the team of Kaiser and Hughes had projects in addition to the much discussed flying cargo boat, he stated that "We've agreed Mr. Hughes will make any and all announcements on projects in which we are interested."

Concerning contract termination, Kaiser predicted "lots of suffering if adequate machinery isn't set up promptly. We've already reached the critical point in cutbacks." He added that he was expecting shut-downs shortly at four of his plants, which in turn would cause a partial closing down of three others.

"There's a great deal of discussion on the question and you can't talk about postwar and war at the same time without discouraging war workers. I think this is wrong. People are leaving aircraft and other war jobs in alarming numbers because they feel the war is won. They are doing this because no one is telling them that production for war and postwar are one and the same. We must impress workers that full production powers must go on in peace as well as war."

Kaiser previously reported "We've been studying the possibility of purchasing the American President Lines for several months. At present, however, it does not look like we will make a bid for the properties."

Aviation Veterans

Fifty years of combined service to aviation are represented by these two veterans. Charles A. "Chief" Kidder, left, superintendent and chief engineer at Aircraft Industries Company, Western distributor for Wright engines, greeted William B. Birren, new sales and service manager of Wright Aeronautical Corporation, when the latter visited the West Coast recently.

Plane Makers Must Chart Own Course, Nelson Warns

AIRCRAFT MANUFACTURERS must chart their own plans to keep their expanded facilities moving in peacetime production, and not rely on the Government, WPB Chief Donald Nelson told the House Postwar Planning Committee, headed by Rep. William Colmer (D., Miss.), last fortnight.

He warned against the Government setting up a precedent during the reconversion period of telling industry what to produce and then furnishing the wherewithall, declaring that such a policy would "do great violence to free enterprise."

"It is up to these aircraft companies to figure out how they are going to keep their facilities busy", Nelson declared.

"Scheduling in Reverse"

If manufacturers, as the war program is cut back, approach the WPB with the question "What do we do now?" Nelson suggested that his reply to them would be: "You determine what you are going to do."

"Let them (industry) exercise their own judgment of what they want to produce", and then, as soon as the war program permits, materials will be released for that production," Nelson said.

During the reconversion period, he reported, WPB's job would be one of "readjustment" or of "scheduling" in reverse. As war contracts are cancelled, he said, WPB would determine, first, if other war work might be given to the firm, then what essential civilian production a firm can handle, and next, if essential materials could be allowed the firm for non-essential civilian production.

"You will not have a recurrence" of the abrupt cancellation of the Brewster contract, Nelson assured Congressmen, but added that the situation in which thousands of aircraft workers were left unemployed will be repeated many times in the aircraft field, during reconversion, because there is no conceivable peacetime market for "8,900 planes a month". The solution to this problem of the aircraft industry rests on the "initiative of management", he emphasized.

Of the Brewster cancellation, Nelson said: "I am glad it happened as early as it did" because it focused attention on the situation. In the Brewster case, however, he added, WMC was able to offer the 8,000 employes at the Long Island plant 11,000 jobs in other industries and Brewster employes at the Johnsville, Pa., plant were near the Philadelphia labor-shortage area.

An "expansionist" philosophy, the development of foreign markets, and helping the rest of the world to rebuild itself are the keys to postwar prosperity for the U. S., Nelson maintained. The war has expanded the nation's economy and it is "not possible to shrink it back to a 1938 economy", he said.

'Mechanical Digestion' Makes Wood Veneers For Aviation Purposes

Methods of removing the essential part of wood cells by mechanical digestion and making improved wood veneers by impregnating them with resinous material which can be molded into curved shapes or laminated into flat panels were discussed at an aviation meeting of the American Society of Mechanical Engineers in Los Angeles June 8 by Foster Luce, research engineer of Westcraft Incorporated.

Delignified veneers are impregnated by immersion in phenolformaldehyde solutions. Various degrees of heat are used in drying the veneers. Low temperatures give soft, pliable pieces, and higher temperatures give harder, low density types, Luce related.

Raymond B. Stringfield, process engineer at the Consolidated-Vultee Aircraft Corp., Downey, Cal., told the session that as planes of new types for severe service are developed, rubber specifications have to be revised.

"Nowhere in industry does an engineer have to contend with more extreme ranges of temperature, fluid resistance, vibration, sunlight, and at the same time have to go to almost any extreme to save a pound of weight," Stringfield said. The rubber industry, which for the last 20 years has developed its information on natural rubber now is faced with the task of doing the same thing for a dozen types of synthetic rubber.

Oil Man Wins Air Trophy

T. M. Reid of Toronto, aviation sales manager for a Canadian oil company, has been awarded the McKee-Trans Canada trophy "for meritorious service in the advancement of aviation in Canada."

Collins Heads Washington Office of Bell Aircraft

Harry E. Collins, vice president and assistant manager of the Georgia Division of Bell Aircraft Corp., has assumed charge of Bell's Washington office but remains a vice president of the company. He succeeds Frederick R. Neely, who joined the staff of *Collier's* Magazine last March.

Collins

Collins became associated with the Bell organization six years ago as vice president in charge of government contracts at Buffalo. He had been with the Procurement Division of the Treasury Department in Washington and prior to that was a captain in the U. S. Navy.

Ryan Executives Win Service Pins

Two engineers and two production officials of Ryan Aeronautical Co. recently received service pins from T. Claude Ryan, company president. Left to right are Will Vandermeer, chief project engineer, and Millard C. Boyd, chief development engineer, recipients of 10-year pins; Ryan; and G. E. Barton, factory manager, and Eddie Molloy, vice president-manufacturing, who received three-year pins.

Constellation in 'Limited Production'

Lockheed's record-breaking C-69 is in production on this assembly line at Burbank, with every completed plane going to the Army. Flown by TWA, a Constellation prototype recently set a trans-continental transport speed record of 6 hours, 58 minutes between Burbank and Washington. This plane carried 17 persons, but the military model now in production seats 60 passengers and has alternative sleeping accommodations for 22, plus berths for a relief crew of four.

Aviation Mart Opens in Chicago; Curtiss-Wright First Exhibitor

The American Aviation Mart was opened in Chicago June 5 with Curtiss-Wright Corp. the first aviation company to enter a display. The mart, located on the 17th floor of the American Furniture Mart on Chicago's Lake Shore Drive, will at present offer for sale equipment and materials no longer needed by the wartime aviation industry, but later will serve as a central location where the industry may go to buy parts and supplies of all kinds, according to Col. Lawrence H. Whiting, president of the furniture institution who helped promote the project.

J. C. Evans, assistant secretary of Curtiss-Wright who helped complete arrangements for the opening of the mart, said that samples of the many items to be sold, most of them discarded because of wartime changes in design and methods, will be displayed so that manufacturers may easily find goods they require.

"The constantly changing designs of airplanes and improvements, and changes in manufacturing methods, produce large stocks of materials and equipment that can no longer be used," he said. "Curtiss-Wright, as well as other aviation companies, wants to dispose of such stores in order to reduce postwar inventories."

Purchases at the mart may be made by any type of manufacturer, but all are subject to approval of the Army, Navy, and War Production Board.

Coordination of Science with Education Urged by Bendix Aviation's President

Mass science education to meet the coming "automatic age" was urged by Ernest R. Breech, president of Bendix Aviation Corp., in an interview early this month.

"If industry is to maintain its status as the main driving force in American life, it must take the lead in coordinating science with mass education," he said. "Aggressive methods for capitalizing the immense 'stockpile' of scientific knowledge, built up in accelerated wartime research, must include a broad educational program directed to the millions of average Americans who will want and use the improved products of the future."

Breech declared that stepped-up product development and progress in mass production methods to meet war's requirements for scientific devices has brought the world "10 to 20 years closer to an ultimate automatic age, destined to remove drudgery, brute force, and awkwardness from the every day lives of millions."

WHITE KNOWS TRANSPORTATION *FROM THE GROUND UP*

THEN & NOW—The Boeing biplane in the small picture at the left is being refueled by a White Truck in the fleet of The Standard Oil Company (Ohio). The picture was taken 15 years ago. Above, a modern White in the same fleet is refueling a Flagship of American Airlines.

Aviation Pioneers

WHITE TRUCKS have had more than a quarter-century of experience in aviation. Refueling planes is only one of many services they perform at airports everywhere. They also help to build and maintain airports . . . haul mail and cargo . . . and perform a score of other essential services.

The future will find many more ways for dependable trucks to serve aviation's progress. White is cooperating with a number of firms in aviation to solve various phases of their ground transport problems. Write for any information you need. Your inquiry will receive the attention of men who are interested in aviation and who know "transportation from the ground up."

White

THE WHITE MOTOR COMPANY • Cleveland

Builders of **U. S. Army Tank Destroyers, Scout Cars, Half-Tracs, Prime Movers and Cargo Trucks, the complete line of Super Power Trucks and Tractors, City and Inter-City Coaches, Safety School Busses and the Famous *White Horse.***

FOR MORE THAN 40 YEARS THE GREATEST NAME IN TRUCKS

New Photo of Fairchild's UC-61K

This four-place utility cargo plane, produced by Fairchild Aircraft, is in use on many foreign fronts. It is used to transport pilots from operations areas to rest centers and aircraft plants, and to provide a means for officers to quickly cover ground behind the lines. It is a revision of the C-61, built in 1942 for the RAF, and is a refinement of the Fairchild '24', peacetime commercial cabin plane.

Bottleneck Between Douglas Plant, Vendors Broken by Pre-Inspections

Douglas Aircraft Co. is bridging the bottleneck between its warplane plant in Tulsa and 40 of its vendor-manufacturers through use of a light delivery truck, packed full of precision tools, which serves as a "source inspection booth-on-wheels."

Six months ago, many machine parts produced by vendors in the Tulsa area were being rejected. Today, source inspection, facilitated by the portable booth, is proving that production can be greatly speeded. The truck idea was conceived by F. B. Bruce, material superintendent and purchasing agent for the Tulsa plant, who decided that source inspection at vendors' shops with educational instruction on blueprint specifications was the only method of reducing the number of rejections.

The inspection service was started in May, 1943, with two inspectors. Today, there are 10 inspectors and "a sharp decline in rejections is already apparent," Douglas announces.

"Under former procedure of plant inspection, the vendors were forced to machine parts, send them to the plant for final inspection, haul some parts back to their shops for rework, throw many parts into the scrap salvage pile, and begin the process over again," says Douglas. "With the present system of source inspection, most of the 'bugs' are eliminated before the entire order of parts is delivered."

WMC Channels All Hiring Through Federal Office

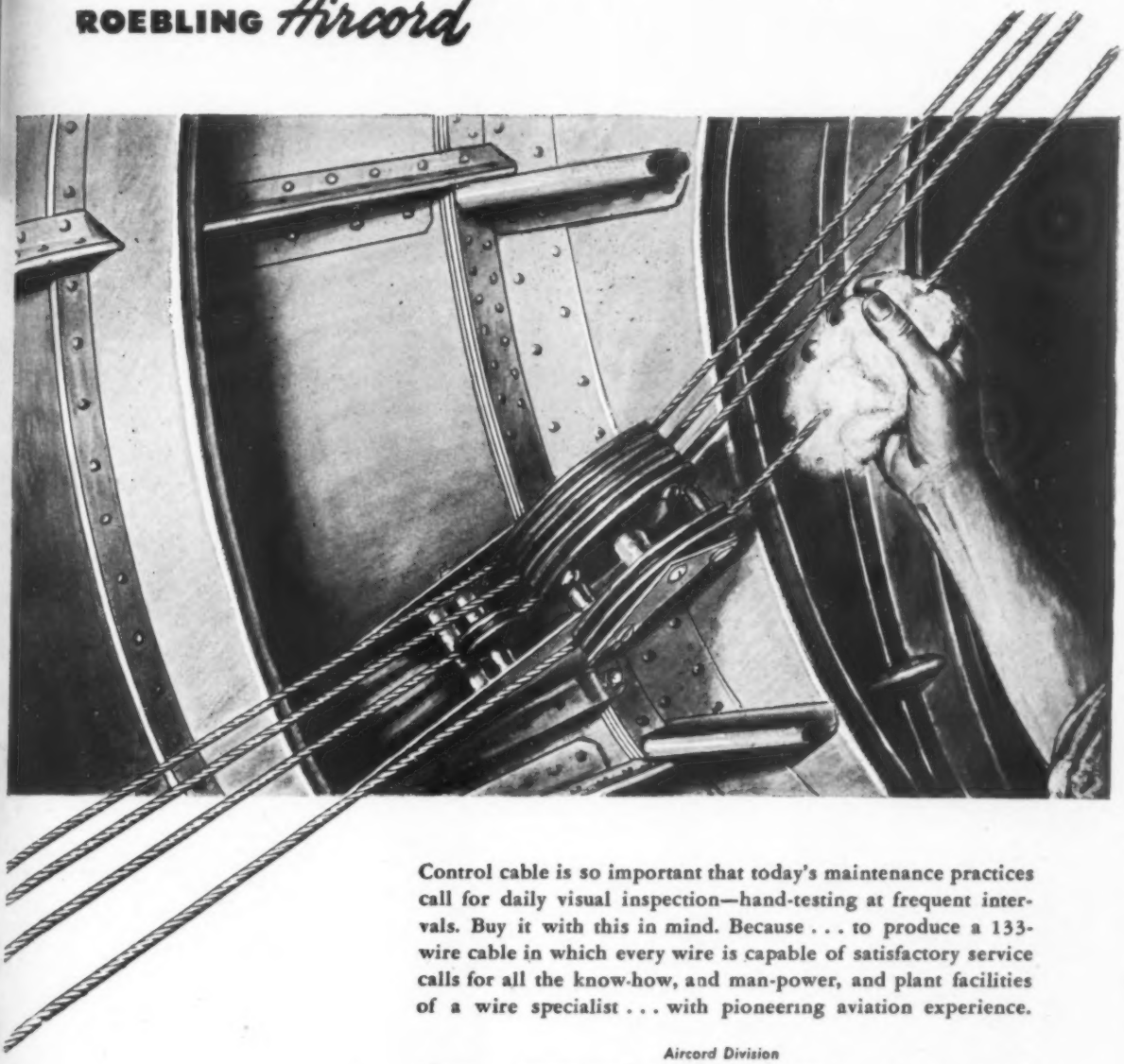
Keeping war production workers in essential jobs after cutbacks have released them now is the major problem of the War Manpower Commission. To meet this changing phase of the still critical manpower situation, WMC Director Paul V. McNutt has extended the plan of controlled or priority referral to all communities in the country regardless of their labor shortage classification.

Controlled referral, which has been in effect on the West Coast and other key aircraft areas such as Buffalo and Hartford for many months, channels the hiring of all male labor through the United States Employment Service allotting priorities for workers to the most essential industries in each area. Local Management-Labor Committees, who were made responsible for putting the national extension into effect by July 1, may modify the basic pattern to fit local situations.

The plan announced by McNutt provides that employment ceilings must be set for all plans in Group I and II areas (areas of acute or imminent shortage) and that Manpower Priorities Committees to determine the relative need and urgency of each plant also must be established for these areas. Local committees were also asked to begin intensive recruitment campaigns to transfer workers from loose labor areas to meet urgent war production demands.

It's inspected this way . . . and should be bought with this in mind

ROEBLING *Aircord*



Control cable is so important that today's maintenance practices call for daily visual inspection—hand-testing at frequent intervals. Buy it with this in mind. Because . . . to produce a 133-wire cable in which every wire is capable of satisfactory service calls for all the know-how, and man-power, and plant facilities of a wire specialist . . . with pioneering aviation experience.

Aircord Division

JOHN A. ROEBLING'S SONS COMPANY, Trenton 2, New Jersey

Branches and Warehouses in Principal Cities

ROEBLING

means Control in the air

WIRE ROPE AND STRAND • FITTINGS • AERIAL WIRE ROPE SYSTEMS • COLD ROLLED STRIP • HIGH AND LOW CARBON ACID AND BASIC OPEN HEARTH STEELS • ROUND AND SHAPED WIRE • ELECTRICAL WIRES AND CABLES • WIRE CLOTH AND NETTING AIRCORD, SWAGED TERMINALS AND ASSEMBLIES • SUSPENSION BRIDGES AND CABLES

Rapid Inventories Clearing Way For Moving Surplus Materials

SURPLUS AIRCRAFT materials will begin moving from contractors plants into private warehouses during the next two weeks and, with increasing momentum, throughout the summer. Aircraft manufacturers, the first group to benefit from a concrete policy for quick clearance of surpluses, have cooperated by making more rapid inventories of their materials than Washington officials had predicted was possible.

After a series of meetings with representatives of private warehouses, Murray Cook, New York agent of Metals Reserve Company, a subsidiary of Reconstruction Finance Corp., met in Washington June 12 and 13 for a final conference with Aircraft Scheduling Unit officials and Henry W. Cornell of RFC. At this meeting, final drafts of the contracts between MRC and the warehouses were drawn up and prepared for signature.

Original Plan Changed

Several changes in the original plan have been made including the decision that Materials Reserve will assume direct ownership of aircraft manufacturers' surplus stocks since there were too many legal impediments to the original idea of using the consignment method. Warehouses will act as agents of MRC, assuming no risks of direct ownership.

The bulk of the surplus materials which include raw materials such as aluminum, copper and steel, standard aircraft hardware and components such as nuts, bolts, valves, switches, rheostats and bearings, has been accumulated during the normal course of production. Contract terminations and cutbacks in the glider and trainer plane programs created some idle inventories. However, the majority are the result of design and engineering changes and reductions in manufacturers' requirements due to increased efficiency and reduced spoilage.

WPB Cooperates

Before surpluses are bought by Metals Reserve, attempts will be made to turn them over to the Army Air Service Command and the Aviation Supply Office of the Navy Bureau of Aeronautics for use in aircraft maintenance or to other aircraft manufacturers for use in current production.

Meanwhile Congressional action on overall surplus policy seemed probable before the summer recess. Surplus War Property Administrator Clayton has been conferring with representatives of a number of Congressional committees and agreement has been reached on a tentative draft for a Surplus Property Bill to be used as the focus point for hearings. Clayton feels he now has had time to determine where disposal powers and responsibilities should lie and that his agency has accumulated sufficient experience to be able to testify on future policies.

War Production Board regional offices will cooperate with the procurement and disposal agencies to find buyers for surplus materials, Clayton announced recently. Each of the 13 regional offices will have on file a list of property available in its territory and offerings will be made in conformity with the announced SWPA price policy. These WPB offices are currently arranging for the movement of approximately 30,000 tons of surplus steel and large quantities of other materials weekly.

Other actions taken by Clayton include the establishment of a Machine Tools Division under Mason Britton and the appointment of a subcommittee to study means of aiding small business firms to acquire surplus war property. Headed by Maury Maverick, chairman of Smaller War Plants Corp., the committee includes representatives of RFC, Treasury Procurement, Justice Department and WPB. One of its principle tasks is to determine how surpluses may be offered in lots of such size as to permit small businesses to participate.

Base Set Up for Type Inspections of Surplus Planes at Vandalia, O.

Type inspections of planes which have been declared surplus by military authorities prior to their conversion to civilian aviation have started at a base at Vandalia, O. under the supervision of the Civil Aeronautics Administration.

K. R. Aldrich, chief of the Flight Test Section of the Flight Engineering and Factory Inspection Division, was sent to the new base with a corps of technicians to get the program under way.

The tests will determine whether the surplus aircraft are eligible for commercial certification and if not, what changes will be necessary to meet CAA regulations. The first tests were scheduled on primary and basic trainers and light cargo planes.

This program which is being done under the joint cooperation of Army, Navy and CAA is considered highly important in not only restoring civil aviation to prewar levels but particularly for the part it will play in the postwar development period.

Aircraft Engines in Trucks?

Heavy-duty ground vehicles may be outfitted with aircraft-type engines in the postwar period, Vincent C. Young, of Wilcox-Rich Division, Eaton Manufacturing Co., Detroit, predicted at an SAE National War Materiel Meeting in Detroit June 6. The aircraft engine's war-developed qualities of light weight, high power, economy, and reliability will be welcomed by truckers seeking to transport the greatest payload over the most miles at the least cost, he said.

SIMMONDS AEROCESSORIES, Inc., is presenting the story of the development of a group of advanced aircraft and industrial products in a new illustrated brochure. Entitled "Simmonds Products Fly with Famous Planes," the publication describes such products as the Simmonds automatic engine control, Simmonds precision push-pull control, hydraulic fuse and the chronometric radiosonde.

LOOK TO THE Great Southwest for AVIATION Progress

OVER the sprawling expanse of Texas and the great Southwest, aviation has a big promising job. Here lies an area born to fit the fullest service pattern in aviation development, commercial and private.

Great distances, year-round flying weather and suitable terrain all go to make this part of our country a beehive of aviation activity in the post-war air age.

But, not by accident will this happen. There is work ahead, much of it, to make this vision blossom into practical reality. Capable planning, air age education and efficient application of the "know how" in operation, distribution and service must lead the way.

Much of the responsibility of the job will rest upon organizations like AVIATION ENTERPRISES, LTD., whose future is analogous to aviation progress in this section—whose operational resources are sound and adequate for the big jobs ahead.

Keep Your Eyes on the Southwest

Aviation manufacturers, fixed base operators and individuals interested in aviation services and markets of the Southwest should direct their inquiries to Aviation Enterprises, Ltd.

Aviation Enterprises Ltd.

CONTRACTORS TO THE U. S. ARMY AIR FORCES

MUNICIPAL AIRPORT
HOUSTON

AVENGER FIELD
SWEETWATER

Manufacturing Personnel

Jeffrey Baker Dunlap

S. Paul Johnston, Washington manager for Curtiss-Wright Corp., is taking leave of absence and will report for active duty with the Navy today (June 15).

R. F. C. Taylor has been appointed commercial sales director of Consolidated Vultee Aircraft Corp. This is a new office for negotiating sales of airplanes to airlines and the distribution of private planes. Convair also announces: **J. E. Crumbley** has been promoted to superintendent of field operations; **Fred F. Gignilliat** has been named general employment supervisor, and **E. L. Williams**, superintendent of major assembly departments; **Frank E. Dunn** has been named superintendent of tool cribs, all at Fort Worth; and **E. N. Laurance** has resigned as works manager of the Miami division.

James P. Jeffrey has been appointed personnel manager of Hamilton Standard Propellers replacing **W. T. Beebe**, who is leaving Hamilton to become personnel manager of Pratt and Whitney Aircraft Corp. of Missouri. **Carl F. Baker** has been named chief engineer of Hamilton after serving as assistant chief engineer since January, 1939.

D. E. Dunlap, formerly engineering manager for Douglas Aircraft at Tulsa, has returned to the company's home plant at Santa Monica as executive engineer. **W. L. Whittier** of Douglas-Tulsa has been appointed engineering manager of the plant. **E. B. Sporleder** is the new administrative engineer at the Douglas home plant.

J. Nelson Kelly has been appointed executive vice president of the Fibre Lock-Nut Corp.

Edward L. Warner, Jr., is the new manager of the aviation division of Automotive and Aviation Parts Manufacturers, Inc., Detroit.

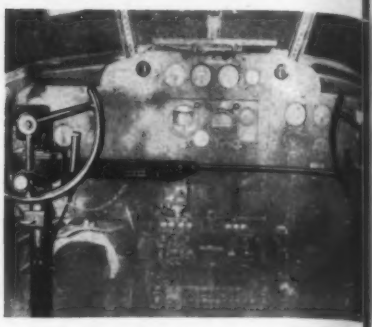
Thomas H. Speller heads General Engineering Co., Buffalo, following the retirement of **Wilbur Johndrew.**

"Duke" Reid, World War I flyer and lately field service representative for Brewster Aeronautical Corp., has been named assistant chief inspector in the aircraft division of Willys-Overland Co.

Richard Cowell has resigned as Washington correspondent of the St. Louis Globe-Democrat to become special assistant to Jess Sweetser, public relations director of Curtiss-Wright Corp.

Reid Cowell Kelly

Aileron, Elevator Lock



The small U-shaped plastic casting shown above has been designed by engineers of Glenn L. Martin Co. to lock the ailerons and elevators of the PBM-3 Mariner in a neutral position when the big Navy patrol bomber is not in the air. It weighs only .66 pounds.

Advertising Firm Named

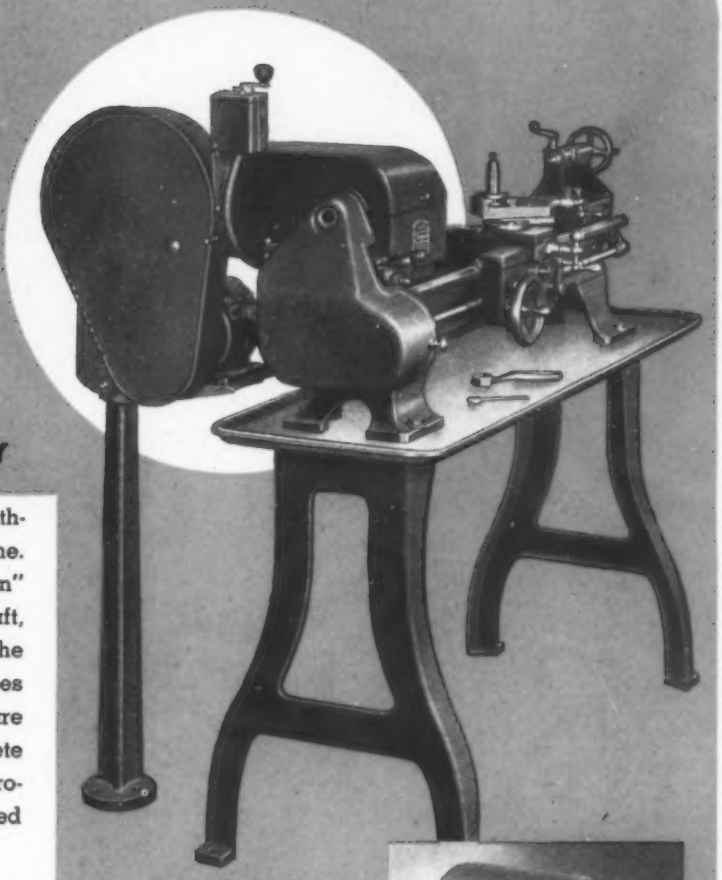
Jacobs Aircraft Engine Company, Pottstown, Pa., has appointed L. E. McGivena & Co., New York, to direct its advertising. Aeronautical, national and business magazines are among those being used.

FORD MOTOR CO. reports that its entire aircraft program was on schedule during May. Production increases during the last six months totaled 70% for the 2,000-horsepower Pratt & Whitney engine, while the B-24 bomber program at Willow Run continued ahead of projected schedules. A 25% increase has been recorded during the last six months in the output of the General Electric turbo-supercharger and there was a 10% increase in production of engine generators.

Turntable Grinder

Ring grinding has been reduced to a simple operation at Southwest Airway's overhaul depot. Operator Edith Wade now turns out 3½ sets per day on the turntable grinder recently installed. Former production rate under handhoned conditions was a set-and-a-half per day.

Enclosed Design



- PROTECTS LATHE OPERATOR
- KEEPS VITAL PARTS CLEAN
- MAKES BELT CHANGING EASY

The operator does not catch fingers or clothing in moving belts or gears on a Logan Lathe. The Cone Pulley Guard in its normal "down" position completely covers the countershaft, headstock and back gear assemblies. The motor-drive belt and change gear assemblies are completely enclosed. All guards are quickly and easily opened giving complete accessibility. Not only is the operator protected, but vital parts of the lathe are shielded from dust and dirt accumulations.

Raised to its "up" position, the Cone Pulley Guard automatically moves the countershaft toward the headstock, releases flat belt tension, and makes changing the belt position easy and safe...an exclusive, patented Logan feature. The flat belt tension is easily and quickly regulated by a simple screw adjustment. Full information on all the advanced design features of all models of Logan Lathes will gladly be sent you on request. Write today for your copy of the latest Logan Lathe catalogs.

OPERATOR PROTECTED... VITAL PARTS KEPT CLEAN

Countershaft, back gears, headstock, change gears and motor-drive belt are all completely enclosed, yet quickly accessible.

BELT CHANGES EASY AND SAFE

Raising the Cone Pulley Guard to "Up" position automatically moves the countershaft toward the headstock, releasing tension on the flat belt.

BRIEF SPECIFICATIONS

Swing over bed, 10½" . . . bed length, 43⅛" . . . spindle hole, 2 3/32" . . . capacity, ⅝" with push type collet . . . 6-position automatic indexing turret . . . stroke of turret, 4¼" . . . 12 spindle speeds from 30 to 1450 r.p.m. . . . all moving parts protected by ball bearings or self lubricating bronze bearings.

No. 850 MANUFACTURING TURRET LATHE

Logan

LOGAN ENGINEERING CO.

CHICAGO 30, ILLINOIS

*One of a series describing the finer features of Logan Lathes . . . Look for the next of the series

Balancing a ~~dynamotor~~ life...

Maetta Lambert knows why each armature that goes into the Altair* dynamotors must be patiently balanced. Miss Lambert has two brothers in the service.

Altair* dynamotor armatures are balanced both statically and dynamically as but one of many tests and inspections of this precision product before it is installed in the vital electrical, communication and radio equipment manufactured by Pacific Division.

With a 28-volt input, Model 3971 Altair* Dynamotor has an overall efficiency in excess of 50%. Maintenance has been simplified by the use of interchangeable end-bells and by coding all major components for easy assembly. Service is necessary only each 1000 hours of operation. Write for complete specifications and data. Pacific Division, Bendix Aviation Corporation, North Hollywood, Calif. Sales engineering offices in St. Louis, Dayton and New York.

**The new trade name of Pacific Division, Bendix Aviation Corporation.*

Typical of the use being made of Altair dynamotors is the compact installation being made in Interphone Amplifier equipment which the Pacific Division supplies for many fighting planes.

Pacific Division
Bendix Aviation Corporation
(Formerly Bendix Aviation, Ltd.)
NORTH HOLLYWOOD, CALIF.

DESIGNERS AND MANUFACTURERS OF RADIO AND HYDRAULIC EQUIPMENT — OUR PART OF THE INVISIBLE

At the Helm of Reorganized Standard 'Chute

Officers of reorganized Standard Parachute Corp., which is now employe-owned, are—Seated, left to right: C. B. King, vice president; C. G. Morehouse, president. Standing, left to right: L. D. Margulis, vice president; D. L. Flagg, secretary; O. J. Fernsten, treasurer; George Russell, vice president.

Sunstills Delivered

More than 30,000 sunstills have been delivered to the air forces, according to George Gallowhur, president of Gallowhur Chemical Corp., New York. Except for purification of water by chemicals, the sunstill offered the only portable method, Gallowhur said. It completes 200 years of effort to perfect such a device. A pint of drinking water was obtained from salt water under average conditions in eight hours.

Much Gasoline Saved

Thousands of gallons of gasoline are saved in the average 1000-plane raid over Germany by the new "injection carburetors," which now equip the majority of Allied fighters and bombers, according to Bendix Products Division of the Bendix Aviation Corp. The carburetor is a potent "atomizer" which automatically supplies engine superchargers with an even explosive spray of fuel and air.

Visitors' Day at Continental Plant

Two high ranking officers of the AAF Materiel Command recently inspected Continental Air Lines' heavy bomber modification plant at Denver. Shown in above photo are, left to right—Stanley R. Shotto, CAL general manager; Maj. Gen. Charles W. Branshaw, commanding general of the Materiel Command; Brig. Gen. Ray G. Harris, commanding the Midwestern Procurement District, Materiel Command; and Terrell C. Drinkwater, CAL executive vice president.

Leading Aviation Stocks

New York Stock Exchange

	Week Ended May 27				Week Ended June 3			
	Sales	High	Low	Net Change	Sales	High	Low	Net Change
American Airl.	1,100	62½	60½	— ⅛	1,700	60¾	60¼	— ⅜
Aviation Corp.	10,300	3¾	3⅝	.....	10,900	3¾	3⅝	.....
Beech Airc.	1,600	8¾	8¼	+ ¼	1,300	8¾	8½	— ¼
Bell Airc.	9,800	13⅛	12	+ ¾	3,700	13	11½	— ⅛
Bendix Aviat.	7,000	37⅞	37¼	+ ⅝	15,500	38½	37⅞	+ ⅜
Boeing	3,500	13¼	13	+ ⅛	3,500	13⅜	12⅞	— ¼
Convair	5,900	12½	12⅛	— ¼	7,500	12¾	12⅛	+ ½
Convair pfd.	700	20¾	20¼	— ⅞	1,400	20⅞	20¼	— ¼
Curtiss-Wright	17,200	5⅛	5	.....	21,900	5⅛	5	— ⅛
Curtiss-Wright A	2,200	15⅞	15⅝	+ ⅛	2,200	15⅞	15⅝	.....
Douglas Airc.	2,700	48¾	48	+ ⅛	3,000	48⅞	48	— ⅝
Eastern Airl.	1,100	36½	35½	—1	1,100	35¾	35¼	— ½
Grumann	1,500	11½	11	— ¼	1,500	11½	11⅜	— ⅛
Hayes Ind.	2,800	7¾	6⅞	+ ⅛	1,500	7⅞	7	.....
Lockheed Airc.	5,600	15⅞	15⅜	.....	6,200	15¾	15¼	— ¼
Martin, G. L.	13,300	20⅜	19⅞	.....	9,500	20¼	18	— ⅜
National Aviat.	1,700	11⅛	10⅞	+ ⅛	1,600	11	10⅞	+ ⅛
No. Am. Aviation	5,800	8⅛	7¾	— ¼	7,900	7⅞	7¾	.....
Northwest Airl.	4,000	20½	19⅝	+ ⅝	2,900	20⅛	19¾	— ⅜
Pan American	5,000	30⅛	29½	— ⅝	6,200	30⅛	29⅝	.....
Penn-Central	1,700	14⅛	13⅝	+ ⅜	3,100	14⅜	13¾	— ¼
Sperry Corp.	6,800	24¼	23⅜	+ ⅛	4,900	24¼	23¾	.....
TWA	1,100	19¼	18¾	.....	2,600	18¾	18⅜	— ⅜
United Airl.	4,400	25⅜	24¾	+ ⅛	6,400	25¼	24⅝	— ⅜
United Airl. pfd.	900	113	112¾	.....	200	113	113	.....
United Aircraft	7,600	29¼	28⅝	+ ¼	6,900	29⅜	26½	— ¾
United Aircraft pfd.	500	104	103½	+ ¾	500	103⅞	103½	— ½

New York Curb Exchange

	Week Ended May 27				Week Ended June 3			
	Sales	High	Low	Net Change	Sales	High	Low	Net Change
Aero Supply B	900	3½	3½	.....	1,200	3⅝	3½	.....
Air Associates	200	9	8⅝	+ ¼	.....	.....	.....	.....
Aircraft Access.	27,100	3⅞	3½	+ ⅛	19,400	4⅛	3⅞	+ ⅛
Aro Equipment	1,000	8⅝	8½	+ ⅛	2,500	8⅝	8⅜	.....
Breeze Corp.	900	11½	11¼	+ ⅛	800	11½	11	.....
Brewster Aero	11,000	2⅜	1⅝	— ⅜	8,200	2½	2⅛	.....
Cessna Airc.	4,400	8¾	8⅛	.....	3,600	8¾	8⅜	— ⅛
Colonial Airl.	1,000	7½	7⅛	— ⅜	1,300	7½	7⅛	.....
Fairchild	2,000	2	1¾	— ⅛	2,200	1¾	1¾	.....
Irving Chute	500	8⅛	8	— ⅛	500	8⅛	8	.....
Jacobs	3,900	3⅜	3	— ¼	3,400	3⅛	2⅞	.....
Northeast Airl.	500	8⅞	8⅝	— ¼	3,500	9⅛	8½	+ ⅜
Republic	2,900	4	3¾	.....	7,900	4	3⅞	.....
Ryan Aero	200	3⅜	3¼	— ¼	200	3⅜	3⅜	.....
Solar Airc.	2,900	3⅜	3¼	.....	1,000	3½	3¼	.....
United Airc. Prod.	900	8	7½	.....	100	7⅝	7⅝	+ ⅛
Waco Airc.	300	3¼	3	— ¼	.....	.....	.....	.....
Western Airl.	1,000	8¼	7⅞	.....	400	8	7¾	— ¼

Air Securities Over the Counter

(Courtesy Merrill Lynch, Pierce, Fenner and Beane)

	May 27 Bid	May 27 Ask	June 3 Bid	June 3 Ask
AIRLINES				
All Amer. Aviation	6	6⅜	6	6
Amer. Airlines Pfd.	113	114	112½	114
Amer. Exp. Airlines	29½	31	29½	31
Braniff	14¼	14½	14⅜	14⅝
Chgo. & So. Com	12	12½	12¼	12⅝
Chgo. & So. Wts.	4¾	5¼	4¾	5
Continental Airlines	10½	11	10⅝	11
Delta Air	23	25	23	25
Inland Airlines	3	3½	2½	3
Mid-Continent	5¾	6⅛	5⅞	6
National	14	15	13¼	14
Northeast Airlines	8⅜	9	8½	9
Penn-Central Pfd.	Entire issue called 5/15 at $27 per share plus accrued dividend.			
MANUFACTURERS				
Aeronca	2½	3	2½	3
Air Assoc.	8½	8⅝	8¾	9
Aircraft Accessories	4	4½	4	4½
Airplane Mfg. & Supply	70c	80c	70c	80c
Columbia Aircraft	¼	½	¼	½
Continental Aviation	2⅞	3⅛	2⅞	3
Delaware Aircraft Pfd.	25c	.....	25c	.....
General Aviation Equip.	1⅛	1½	1⅛	1½
Globe Aircraft	.....	1¼	.....	1¼
Harlow Aircraft	⅛	¼	⅛	¼
Harvill Corp.	1⅝	2	1⅝	2
Interstate Air. & Eng.	6	6½	6	6½
Jacobs Aircraft	3	3¼	3	3¼
Kellett Aircraft	1⅜	1⅝	1⅜	1⅝
Kinner Motor	60c	70c	60c	70c
Liberty Aircraft	14½	14¾	15	15¼
Luscombe Airplane	½	¾	½	¾
Menasco Mfg.	90c	1.10	90c	1.10
Northrop Aircraft	4¾	5¼	4⅞	5⅛
Piper Aircraft Com.	7¼	7¾	7¼	7¾
Piper Aircraft Pfd.	18	19	18	19
Rohr Aircraft	6½	6¾	6½	6¾
Std. Aircraft Prod.	75c	85c	75c	85c
Taylorcraft Com.	2½	2⅞	2½	2⅞
Taylorcraft Pfd.	6	6½	6	6½
Timm	35c	45c	35c	45c
Utd. Air. Prod. Pfd.	14½	15½	14½	15½

DPC Authorizations

UNITED AIRCRAFT PRODUCTS, INC., for additional equipment at a plant in Dayton; cost approximately $155,000; over all commitment of approximately $460,000.

Financial Notes

CONTINENTAL MOTORS CORPORATION declared a dividend of 15 cents per share on the outstanding common capital stock, payable June 30 to stockholders of record at the close of business June 9.

PERFECT CIRCLE COMPANY has declared the regular quarterly dividend of 50 cents per share on the 162,500 shares of outstanding capital stock. The dividend is payable July 1 to stock of record at the close of business June 9.

EASTERN AIR LINES reported for the quarter ended March 31 that net profit was $179,520, or 30 cents a share, compared with $278,296, or 47 cents a share last year.

NATIONAL AIRLINES reports that Lehman Bros. is offering 113,333⅓ shares of its common stock, $1 par value, priced at $13.75 a share. The issue will provide the company with working capital for expansion, NAL says.

WEST COAST AIRLINES, INC., Seattle, has increased its capital to $300,000.

DELTA AIR LINES paid a 50-cent annual dividend June 10 to stockholders as of record May 31. Total payments were $99,192.

AMERICAN AIRLINES, Inc. announce earnings in the first quarter of the year of $597,796.44 net after provision for federal taxes. This is equivalent to $0.95 per share on outstanding common stock after provision for preferred dividends, compared with an adjusted figure of $1,139,772.59 for the first quarter of 1943, which was equal to $1.89 per share. The company's gross revenue for the quarter ending March 31, 1944 was $7,454,864.16 compared to $6,973,648.19 for the same period of last year. However, the report reveals that expenses during the first quarter of this year rose to $6,134,657.11 as compared to $4,682,929.91 for the 1943 period. A substantial portion of the expense increase was due to the hiring and training of a large number of personnel as replacements for employees subject to call by the Armed Services and also, because of preparations by the company to operate additional equipment when more airplanes are made available by the Army.

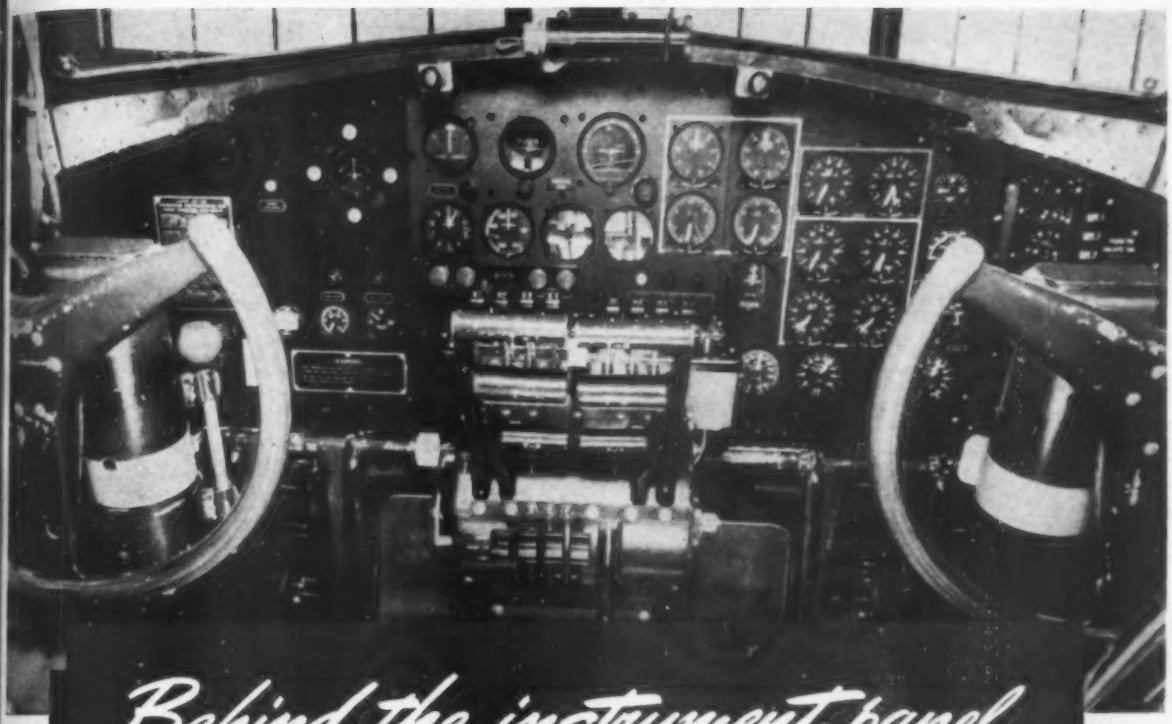
Incorporations

AERONAUTICAL SUPPLY CO., Inc., Bronx, N. Y.; aeronautical and airplane parts, etc. Sidney Sugarman, Bronx; 100 shares npv. dpc authorizations—

DECAT MERCIER CORP., Queens, N. Y. aircraft parts, etc.; Sayers Bros., New York City; 100 shares npv.

REPUBLIC AVIATION CORP. reports that each of the 14,000 employes at its Farmingdale, L. I., plant received a bonus of 37.8% for the four weeks' period ending May 12. The rewards were for "breaking all efficiency records in producing P-47 Thunderbolts," President Alfred Marchev said.

TIMKEN ROLLER BEARING CO. announces the organization of a subsidiary, Timken Roller Bearing Co. of South America, to service Timken products in the Latin-American countries. The new firm will be under the direction of Jules A. Morland. As part of its organization program, Timken now has two Brazilian engineers, Murillo Garcia Moreira, of Rio de Janeiro, and Jose Marianno Chaves, of Sao Paulo, in its Canton, O., plant.



Behind the instrument panel of many a Flying Fortress...

RESISTOFLEX *hose assemblies*

ON the instrument and gauge lines of the Boeing Flying Fortress... and on medium pressure hydraulic lines also... Resistoflex hose, with its inner core of COMPAR, provides freedom from the danger of collapsing, gumming or internal erosion.

COMPAR, the unique elastic plastic, is produced in many formulations, each designed for the specific job. In Resistoflex aircraft hose assemblies, it is formulated for complete immunity to oils, hydraulic fluids, gasoline, fuel blends... even those containing the highest percentage of aromatics.

In addition, the smooth surface of COMPAR aids in reducing turbulence and skin friction to a minimum.

Though lighter than other lines of similar construction, Resistoflex aircraft hose provides great strength and toughness . . . withstands heavy shock loads . . . is unaffected by vibration and constant flexing.

Hose assemblies are supplied in standard diameters and lengths for instrument and medium hydraulic lines, in conformity with applicable Army and Navy specifications.

For full details, write for the Resistoflex Aircraft Catalog.

GLOVES PROTECT BOTH SKIN AND METAL

Safeguards against dermatitis for the worker —protection against damage to metal parts —Resistoflex Dual-Purpose Industrial Gloves give both. Made of COMPAR, the same elastic plastic that gives Resistoflex hose its unique properties, these gloves are impervious to organic solvents. Containing no sulphur, they will not tarnish highly polished metal parts, are ideal for delicate inspection work. Write for full details.

RESISTOFLEX

LOW AND MEDIUM PRESSURE INSTRUMENT, HYDRAULIC AND VACUUM HOSE ASSEMBLIES — MANOMETER TUBING, DIPPED AND MOLDED SPECIALTIES.

RESISTOFLEX CORPORATION, BELLEVILLE, NEW JERSEY

Advertisers In this Issue

Manufacturing Digest

ECLIPSE-PIONEER DIVISION, Bendix Aviation Corp., announces the opening of a West Coast branch office at 5655 Wilshire Blvd., Los Angeles, with George E. Pellon, Henry W. Kratzer, Sidney H. Webster, and Jesse C. Wolfe in charge.

CURTISS-WRIGHT's Airplane Division has been permitted to announce that 16,795 planes were produced by its six plants between Jan. 1, 1938 and Dec. 1, 1943. A total of 6,080 were built before Pearl Harbor. The Division's six plants are located in Buffalo, Louisville, Columbus, and St. Louis, and have a total floor area of 9,300,000 sq. ft. The plants employ 85,000 workers. In 1937, the area of C-W Airplane Division plants in Buffalo and St. Louis was slightly more than 600,000 sq. ft. and less than 3,000 persons were on the payroll.

NORTH AMERICAN AVIATION announces that the entire production of B-25 Mitchell bombers will be centered at Kansas City as of July 8. This will enable the company's Inglewood, Calif., plant to concentrate on production of P-51 Mustangs. "Transfer of B-25 production to Kansas City does not indicate a slackening in the Mitchell bomber production program as the Kansas plant is scheduled to produce more B-25s in 1944 than both the Kansas and Inglewood plants produced during 1943," said J. H. Kindelberger, president.

LOCKHEED AIRCRAFT CORP. is maintaining stocks of spare parts for all of its twin-engined transport aircraft models although such models are out of production. In addition, the company is retaining manufacturing tools for the models to assure the availability of needed parts indefinitely.

PACKARD MOTOR CAR CO. reports [illegible] shipments of Packard marine and Rolls-Royce aircraft engines in the first quarter of [illegible] ran 79% ahead of last year's first quarter. Volume in the quarter totaled $113,934,499 compared to $86,798,862 in 1943. Billings currently touching $1,500,000 a day and will increase as the year proceeds, George Christopher, president and general manager of the company, said.

FORD MOTOR CO. reports that its aircraft engine testing facilities have been available since Pearl Harbor, to manufacturers turning out accessories for aircraft engines "at a expense to the manufacturers." A Ford statement says that "accessory manufacturers have been especially anxious to test their products in the No. 1 test house at the Rouge plant because certain aerodynamic characteristics inherent in the structure have made this [illegible] especially rough on accessories."

STUDEBAKER CORP. reports that production of Flying Fortress engines is above 40,000 units. "Our total of Wright Cyclone engine shipments illustrates how we are meeting the need for replacements," said H. S. Vance, chairman of the company's board. "To production of 40,000 units, we have completed several thousand more engines than required to power all of the Flying Fortresses built since Pearl Harbor."

CHEVROLET AVIATION engine plant No. [illegible] at Tonawanda, N. Y., is being enlarged, M. E. Coyle, general manager of Chevrolet division and vice president of General Motors, announced. Additional space will be used for the production of a new 18-cylinder Pratt & Whitney aircraft engine.

WILLYS-OVERLAND MOTORS is turning out more than a million pounds of aluminum forgings monthly for use in virtually every plane now rolling off America's assembly lines. The company insured the continuance of this production schedule by the installation of a conveyor system throughout five buildings. The 700 types of aluminum pieces turned out are transported in monorail carriages from the forging hammer to finishing departments where they are transferred to conveyor belts.

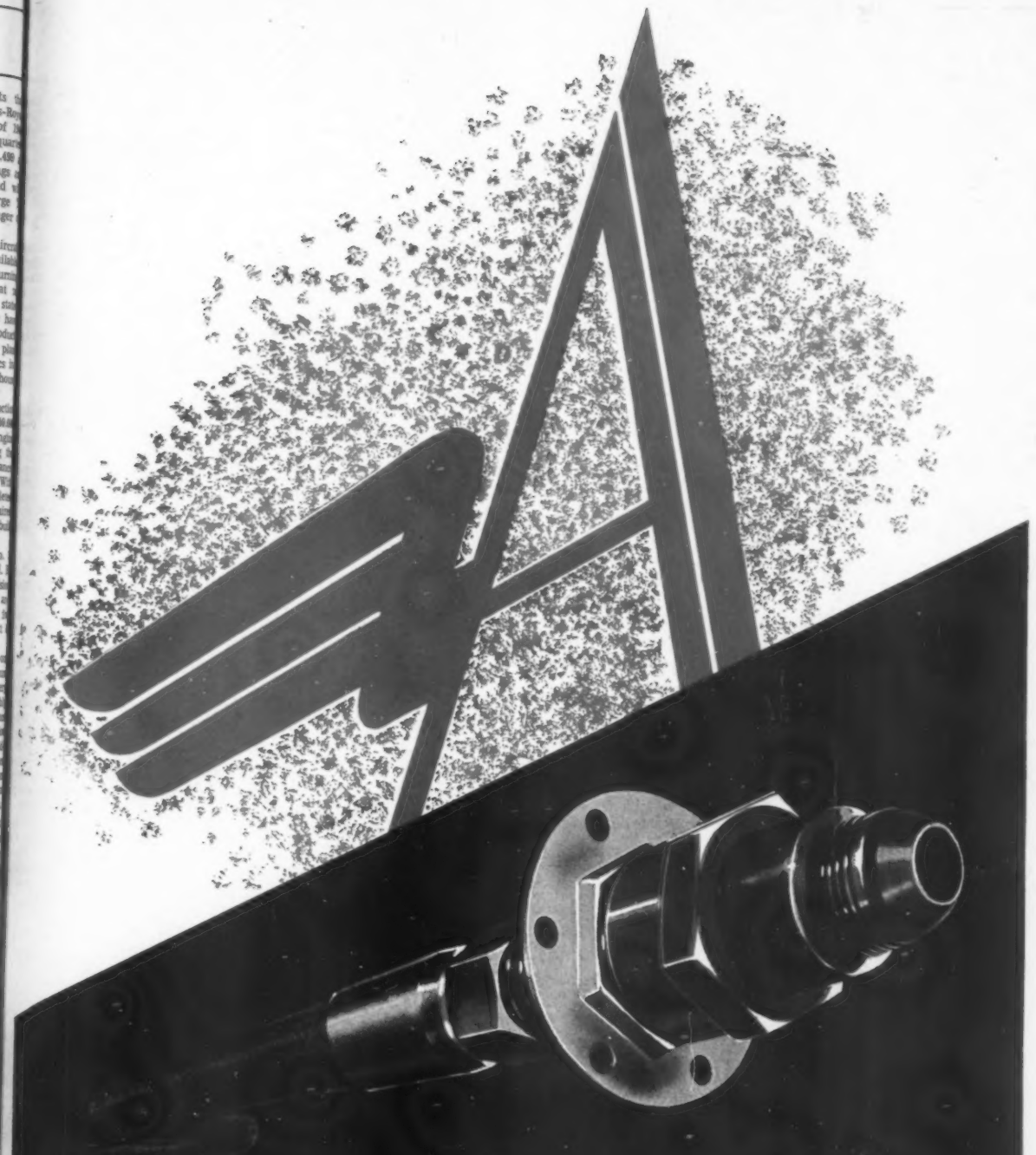
GLENN L. MARTIN CO. announces that [illegible] T. W. Turner has been assigned Officer in Charge of the Naval Training School (Aeronautical) at its Baltimore plant, succeeding Lt. M. C. Howd, Jr., who has been transferred to a Navy staff office in Chicago.

Classified

AIRCRAFT EXECUTIVE—Pilot, 37 years old, 7 years experience manufacture, overhaul, modification. Desires connection in overhaul or operations base work, preferably outside United States, or in post-war planning projects. Could build crew if necessary. Salary secondary to long range prospects and desirability of position. Write Box 375, AMERICAN AVIATION, American Building, Washington 4, D. C.

AERONAUTICAL ENGINEER — Must have certain amount of executive capability; draft exempt. Young man, willing to learn, preferred. Excellent opportunity for right party. Address Box 377, AMERICAN AVIATION, American Building, Washington 4, D. C.

EXPERIENCED AIRCRAFT SALES ENGINEER with administrative, sales and manufacturing background seeking representation of reliable aircraft parts and accessory manufacturer. Has sufficient sources for substantial current business also excellent postwar potential. Write Box 378, AMERICAN AVIATION, American Building, Washington 4, D. C.



AEROQUIP HOSE LINES AND COUPLINGS ARE STANDARD ON ALL ARMY AND NAVY AIRCRAFT. HOSE LINES WITH DETACHABLE, RE-USABLE FITTINGS ARE QUICKLY SERVICEABLE IN THE FIELD . . . COUPLINGS CAN BE DISCONNECTED AND RE-CONNECTED WITHOUT LOSS OF FLUID OR ADMISSION OF AIR.

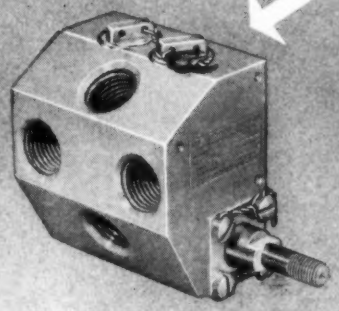
AEROQUIP CORPORATION

JACKSON, MICHIGAN, U. S. A.

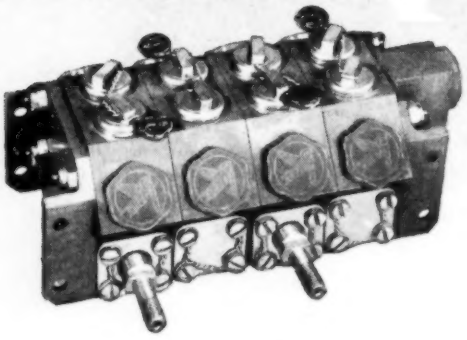
303 WAREHAM BLDG., HAGERSTOWN, MD. - 1709 W. 8th, LOS ANGELES - PRENCO—72 STAFFORD ST., TORONTO, ONT.
PERMANENT LICENSEE: WAGNER ELECTRIC CORPORATION, 6400 PLYMOUTH AVENUE, ST. LOUIS 14, MISSOURI

This name OUTSIDE means QUALITY inside

D 10150 4-way Selector AN 6210 "Mighty Midget" Weight 0.7 lb. Measures 1½" x 2¼" x 2¼". Cap. 3.5 GPM.

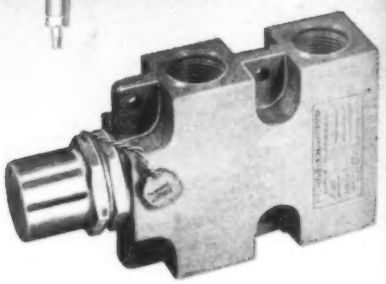


D 10590 "Stacking Midget" Wt. per unit .64 lb. Space savings of 72% and weight savings of 76% may be obtained by stacking small-size high-capacity valves for multiple control installations.



Unprecedented, pyramiding demand for ADEL hydraulic valves and acceptance of ADEL designs as Army-Navy Standards (ample proof of quality) has caused opportunists to offer untried substitutes—momentarily cashing in by copying the appearance but omitting necessary quality materials, skill and precision know-how. ★ The ADEL Customer Service Department is now getting calls for service on imitations, and service is being given although not ADEL's responsibility. Please remember, even ADEL valves sometimes require servicing which ADEL service engineers furnish together with installation, maintenance and general customer liaison work. They are instructed to service whatever equipment needs attention, but their first duty, naturally, is to ADEL products. ★ Some imitations are being sold as "licensed." Before buying we suggest you check at our expense regarding licensees. To make sure of ADEL *performance* and ADEL dependability, we say, "Look for the ADEL name which identifies genuine ADEL products!"

ADEL



D 11800 ADEL Relief Valve AN 6200-8AB=1000-2100 psi Range @ 6 gal. Standard of the industry for maximum performance, top quality. Wt. 1.10 lb. Measures 2 3/16" x 5/16" x 1 3/16".

ADEL PRECISION PRODUCTS CORP.
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Advertisers In this Issue

Manufacturing Digest

ECLIPSE-PIONEER DIVISION, Bendix Aviation Corp., announces the opening of a West Coast branch office at 5655 Wilshire Blvd., Los Angeles, with George E. Pellon, Henry W. Kratzer, Sidney H. Webster, and Jesse C. Wolfe in charge.

CURTISS-WRIGHT's Airplane Division has been permitted to announce that 16,795 planes were produced by its six plants between Jan. 1, 1938 and Dec. 1, 1943. A total of 6,080 were built before Pearl Harbor. The Division's six plants are located in Buffalo, Louisville, Columbus, and St. Louis, and have a total floor area of 9,300,000 sq. ft. The plants employ 85,000 workers. In 1937, the area of C-W Airplane Division plants in Buffalo and St. Louis was slightly more than 600,000 sq. ft. and less than 3,000 persons were on the payroll.

NORTH AMERICAN AVIATION announces that the entire production of B-25 Mitchell bombers will be centered at Kansas City as of July 8. This will enable the company's Inglewood, Calif., plant to concentrate on production of P-51 Mustangs. "Transfer of B-25 production to Kansas City does not indicate a slackening in the Mitchell bomber production program as the Kansas plant is scheduled to produce more B-25s in 1944 than both the Kansas and Inglewood plants produced during 1943," said J. H. Kindelberger, president.

LOCKHEED AIRCRAFT CORP. is maintaining stocks of spare parts for all of its twin-engined transport aircraft models although such models are out of production. In addition, the company is retaining manufacturing tools for the models to assure the availability of needed parts indefinitely.

PACKARD MOTOR CAR CO. reports [illegible] shipments of Packard marine and Rolls-Royce aircraft engines in the first quarter of [illegible] ran 79% ahead of last year's first quarter. Volume in the quarter totaled $113,934,000 compared to $86,798,862 in 1943. Billings are currently touching $1,500,000 a day and will increase as the year proceeds, George T. Christopher, president and general manager of the company, said.

FORD MOTOR CO. reports that its aircraft engine testing facilities have been available since Pearl Harbor, to manufacturers turning out accessories for aircraft engines "at no expense to the manufacturers." A Ford statement says that "accessory manufacturers have been especially anxious to test their products in the No. 1 test house at the Rouge plant because certain aerodynamic characteristics inherent in the structure have made this house especially rough on accessories."

STUDEBAKER CORP. reports that production of Flying Fortress engines is above 40,000 units. "Our total of Wright Cyclone engine shipments illustrates how we are meeting the need for replacements," said H. S. Vance, chairman of the company's board. "With production of 40,000 units, we have completed several thousand more engines than required to power all of the Flying Fortresses built since Pearl Harbor."

CHEVROLET AVIATION engine plant No. [illegible] at Tonawanda, N. Y., is being enlarged, M. E. Coyle, general manager of Chevrolet division and vice president of General Motors, announced. Additional space will be used for the production of a new 18-cylinder Pratt & Whitney aircraft engine.

WILLYS-OVERLAND MOTORS is turning out more than a million pounds of aluminum forgings monthly for use in virtually every plane now rolling off America's assembly lines. The company insured the continuance of this production schedule by the installation of a conveyor system throughout five buildings. The 700 types of aluminum pieces turned out are transported in monorail carriages from the forging hammer to finishing department where they are transferred to conveyor belts.

GLENN L. MARTIN CO. announces that Lt. T. W. Turner has been assigned Officer in Charge of the Naval Training School (Aeronautical) at its Baltimore plant, succeeding Lt. M. C. Howd, Jr., who has been transferred to a Navy staff office in Chicago.

Classified

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